

Migrating Minds: State-Sponsored Mobilization and Return of US-Trained Chinese Scientists During Early Cold War

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Abstract

Transnational talent flows are a powerful force shaping national economic fortunes and geopolitical balance. This article examines how the migration decisions of highly skilled individuals are affected by state-sponsored mobilization. Using U.S.-trained Chinese scientists' return to the newly founded People's Republic of China after 1949 as a case, we construct an original dataset of all Chinese Ph.D. graduates in STEM fields from U.S. universities between 1945 and 1958, their return decisions, and the regional membership distribution of the Association of Chinese Scientific Workers (ACSW)—a key state-sponsored organization aimed at mobilizing returnees. Both fixed effects and instrumental variables analyses show that Chinese graduates' exposure to this organization significantly increases their likelihood of return. Further analyses reveal that ACSW's mobilization was more effective when channeled through scientists' own professional networks, and it influenced their aspiration to return more than ability. These findings unveil important political drivers behind one of the largest episodes of talent repatriations in history, with significant implications for U.S.–China relations today.

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Introduction

The transnational movement of highly skilled individuals has been an integral part of world history and a powerful force shaping national economic fortunes and geopolitical balance (Conrad 2016; Mokyr 2004). From the migration of English artisans to continental Europe in the 19th century (Bensimon 2023), to the relocation of European scientists to the United States during World War II and after the Cold War (Borjas and Doran 2012; Moser, Voena, and Waldinger 2014), and to the influx of Chinese and Indian engineers and entrepreneurs into Silicon Valley in the late 20th and early 21st centuries (Saxenian 2007), these flows often coincided with key historical junctures and served as a crucial channel through which countries acquire scientific expertise, develop strategically important sectors, and accelerate research and innovation.

Given the significant ramifications of global talent flows, many countries have taken an active interest in attracting and retaining highly skilled individuals within their borders (Shachar 2006). This concern is particularly acute for smaller or less developed nations, which often experience a net outflow of talents to larger and more affluent destinations (Boeri et al. 2012). To counter the phenomenon of “brain drain” (Adams 1968; Bhagwati and Hamada 1974), national governments in countries as diverse as China, Israel, Mexico, and South Korea have pursued a variety of strategies to strengthen ties with their diaspora communities and encourage the return of valuable scientific and technical human capital to the homeland (Aupetit 2006; Toren 1978; Zweig and Kang 2020). However, systematic evidence on how these state-sponsored initiatives work and whether they can succeed in repatriating overseas talent remains limited and inconclusive. A commonly held view is that highly skilled individuals—whose expertise often carries high market value independent of the national context—tend to base their migration decisions primarily on personal and professional considerations rather than the policy directives of the state (Mahroum 2000; Solimano 2008; Xie and Killewald 2012). Some studies examining the effect of state-sponsored repatriation programs even come to the conclusion that those programs yield only “meager success” because of inadequate financial support and mismatch between the state’s articulations and migrants’ demands (e.g., Cohen and Kranz 2015, 797).

To better understand how states influence migration decisions of the highly skilled, this article studies a significant episode of return migration by foreign-educated Chinese nationals during the early phase of the Cold War. At the end of the Chinese Civil War in 1949, approximately 3,500 to 5,000 Chinese students and scholars were working or pursuing advanced degrees in the United States; by the late 1950s, more than one third of this group had returned to the newly established People's Republic of China (PRC) (Ministry of Science and Technology 2009; Wang et al. 2023). The return of these US-trained talents, most of whom specialized in STEM-related fields, brought advanced knowledge and technologies to a country that was still largely agrarian, and helped lay the critical foundation for major research initiatives ranging from nuclear weapons and long-range missiles to chemical metallurgy and biochemistry (Ji and Liao 2023). This large-scale repatriation of Chinese scientists is inherently puzzling in light of the vast disparity in living standards, research environment, and political freedom between the U.S. and the PRC at that time. Conventional explanations typically attribute it to either the innate patriotic attachment overseas Chinese held toward their motherland or the discrimination they faced in the U.S. due to systemic racism or heightened Red Scare (Wang 2010). However, we argue that a significant yet overlooked driver behind their return decisions was the active mobilization efforts by the new Chinese party-state.

Our empirical analysis focuses on the Association of Chinese Scientific Workers in U.S.A. (ACSW, 留美中国科学工作者协会), an organization founded by underground members and activists of the Chinese Communist Party (CCP) with the specific mission of mobilizing the return of scientific and technological talents. During its brief but active existence from 1949 to 1950, the ACSW served as a key organizational vehicle for many CCP-sponsored mobilization activities. At its peak, the association maintained 32 regional branches in major metropolitan areas and university campuses. It regularly published nationwide bulletins and organized social events that introduced to Chinese students the current policies and affairs under the newly established PRC state. Many personal recollections and historical records suggest that the ACSW had an influential presence within the circle of overseas Chinese scientists at that time, but systematic evidence on its impact on return mobilization remains limited. We construct a novel dataset that combines the lo-

cation and membership information of all ACSW branches with comprehensive records of Chinese Ph.D. graduates from U.S. academic institutions between 1945 and 1958. Drawing on archival and oral history records from China and historical data from the U.S, we further collect information on important local political and socioeconomic conditions Chinese graduates faced when completing their study and their subsequent return decisions (or lack thereof). This dataset allows us to overcome the selection problem commonly encountered in migration studies by enabling a direct comparison between returnees and non-returnees in terms of personal attributes and circumstances surrounding their migration decisions.

Exploiting the regional and temporal variations in the ACSW's operation, our results from a generalized difference-in-differences design show that exposure to ACSW members and activities significantly increased the likelihood of return among Chinese Ph.D. graduates in science- and technology-related fields. All else equal, one additional ACSW member in a university's vicinity raises the year-on-year probability of return for Chinese STEM graduates in that university by about 0.3 percentage points, or a 3.6 percent increase over the baseline rate of return. To address the potential endogeneity of ACSW presence to Chinese graduates' preexisting propensity to return, we conducted an instrumental variables (IV) analysis using an institution's distance-weighted exposure to the 13 earliest ACSW branches as an exogenous shock. The IV results are highly consistent with the baseline estimates. In terms of the relative magnitude, we find that the influence of the ACSW on return was stronger than most other push and pull factors, including local anti-Chinese sentiment, the intensity of McCarthyism, and the field-specific shortage of scientific talent in the PRC.

In addition to establishing the importance of state-sponsored mobilization for high-skilled migration, we also explored the mechanisms through which mobilization worked. We find evidence that mobilization was most effective when it was channeled through scientists' own professional networks. Exposure to ACSW members from one's own field of study is more than four times as effective in inducing return as exposure to ACSW members from a different field. Furthermore, we investigated whether ACSW mainly affected graduates' *aspiration* to return or their *ability* to

do so. We read and classified over 100 returnees' narratives in which they described the reasons for and the processes of their return. A consistent pattern from these narratives is that returnees disproportionately emphasized ACSW activities as a source of social solidarity and domestic information, but made relatively limited reference to their role in helping returnees overcome logistical or bureaucratic obstacles. This finding provides suggestive evidence that the primary lever the state possessed for mobilization was motivational appeal rather than material inducement.

By examining a major historical case of return migration by Chinese scientists and researchers, this study sits at the intersection of two bodies of scholarship in migration studies—the literature on return migration (e.g., Amanzadeh, Kermani, and McQuade 2024; Borjas and Bratsberg 2021; Cassarino 2004; Constant and Massey 2002) and that on the transnational movements of highly skilled individuals (e.g., Bauder 2012; Findlay et al. 2012; Isaakyan 2024; Kleven, Landais, and Saez 2013). The literature on transnational talent movements has extensively studied their consequences for both individual career development and national innovation capacity (Borjas and Doran 2012; Kerr 2018; Moser, Voena, and Waldinger 2014), but few studies have examined the political and organizational mechanisms that drive these flows in the first place. Meanwhile, the literature on return migration—often centered on less privileged migrants—does seek to understand drivers of migration flows, but the prevailing theories tend to prioritize personal and instrumental considerations such as wage differentials, career opportunities, and family and social ties (Constant and Massey 2002; Geddie 2012; Harris and Todaro 1970; Sjaastad 1962). While not denying the importance of these factors, our findings suggest that they are sometimes heavily influenced—and even overridden—by external political forces, such as mobilization campaigns by the home-country government. By analyzing regional variations in return rates, we provide to our knowledge the first piece of systematic evidence on when and how political interventions succeeded in prompting return migration. In particular, we show that effective mobilization depends on both state action and close collaboration of community insiders: Promises of opportunity and support in the homeland must be credible in order to induce return, and this credibility often stems not only from the state's own messaging, but also from the professional and social reputation of

the community intermediaries who help convey it.

By documenting how political mobilization shaped scientists' migration choices, our study also contributes new evidence to the broader literature of the relationship between scientists and the state. Canonical research suggests that scientists—given the exploratory and critical nature of their work—tend to favor a liberal state where they enjoy the freedom and autonomy to question and discover (Merton 1942; Polanyi 1962; Popper 1945). Our finding that many Chinese scientists heeded the CCP's call and returned to a newly established communist state challenges this conventional view. It suggests that scientists' ideological preferences are not always fixed, but may be highly malleable to the cues and narratives most available to them (Kuznick 1987). Everyday exposure to mobilizing information within one's social and professional circle can alter regime preferences in ways that may appear misaligned with an individual's overt economic and professional interests.

Moreover, our study highlights an important but often overlooked channel through which state intervention influences national development. It is well established that state support is crucial for economic catch-up in late-developing countries (Gerschenkron 1962). A rich literature on the developmental state has argued that the key to the economic success of East Asian economies was the state's ability to harness and regulate cross-border flows of physical and financial capital for national benefit (Wade 2004; Woo-Cumings 1999). Extending this line of argument, our study shows that, by facilitating the return migration of highly skilled individuals, states can also exert significant influence over international flows of *human capital*, which is another vital source of productivity in the modern economy (Ganguli 2015; Hunt and Gauthier-Loiselle 2010; Lucas 1988). The PRC's ability to induce the return of a substantial number of foreign-trained scientific talents was critical to its rapid postwar industrialization following a devastating civil war.

High-Skilled Migration and the Role of the State

A rich and interdisciplinary body of scholarship has studied the various factors influencing the scale and directions of migration.¹ The prevailing theoretical paradigm in the literature treats migration (and return) as an optimization strategy by which individuals or households seek to maximize lifetime income or other socioeconomic opportunities (Harris and Todaro 1970; Sjaastad 1962; Todaro 1969). The neoclassical economic theory of migration, for example, posits that human mobility primarily responds to the earning differentials between origin and destination countries (Massey et al. 1993). Prospective migrants make decisions by comparing their current economic situation in the country of residence with anticipated conditions in the destination country. Within this framework, individuals with higher skills are generally expected to migrate from low- to high-income countries, where the returns to their skills are usually greater (Borjas 1987; Chiquiar and Hanson 2005; Grogger and Hanson 2015). This type of migration is typically viewed as a one-way movement. As such, it often raises concerns about “brain drain”—the permanent loss of scarce human capital in developing areas—and, by extension, the widening global inequality in talent allocation (Adams 1968; Bhagwati and Hamada 1974; Docquier and Rapoport 2012).

However, contrary to predictions from standard economic theories of migration, highly skilled individuals have at times returned to their countries of origin in large numbers—even in face of significant geopolitical and logistical barriers (Saxenian 2007; Toren 1978; Zweig and Wang 2013). The founding of Israel, for example, was followed by a wave of return migration among highly educated Jewish academics and professionals from Europe and North America who sought to contribute to the construction of the new country (Toren 1978). China likewise witnessed multiple waves of return migration by foreign-trained scientists and scholars, during both the Maoist era and the subsequent reform period (Wang 2010; Zweig and Wang 2013). Similar, though smaller-scale, return migration has also been documented in countries such as India, Egypt, Vietnam, and South Korea (Ead 2024; Kapur 2010; Tsuda and Song 2019). Some of these return movements occurred despite stark differences in living standards and professional environment between mi-

¹For reviews of this vast literature, see Massey et al. (1993) and Niraula and Triandafyllidou (2022)

grants' resident foreign countries their countries of origin.

We argue that a crucial yet often underappreciated driver behind these return flows was the proactive mobilization effort by the government of the origin country. While prevailing economic theories of migration typically assume that individuals weigh costs and benefits across locations and act according to rational self-interest, it remains an open question whether individual rationality alone can fully account for life-altering choices like migration. According to research in cognitive psychology, choosing where to live is a paradigmatic example of a class of “big decisions” (Paul 2014; Ullmann-Margalit 2006): they are rare, potentially irrevocable, and can have transformative impact on one's life. Such decisions defy simple cost-benefit analysis because their consequences are profound and laden with deep uncertainty (Ji, [forthcoming](#)).²

To cope with this uncertainty, individuals often have to rely on external cues and heuristics for guidance (Lupia 1994; Zaller 1992). This in turn creates room for political authorities to exert influence. State interventions can be targeted at both shaping the perceived costs and benefits of return and activating affective or normative considerations. Governments can, for example, promise to offer a range of material incentives, such as return visas, dual citizenship, tax exemptions, and career assistance. These preferential terms help reduce the perceived risk of return and improve the relative economic attractiveness of the home country, even in the absence of a systematic improvement in the macroeconomic fundamentals (Jonkers 2008; Kapur 2010; Zweig and Wang 2013). Another common strategy is to appeal to shared emotions and collective identity. Through official media, propaganda campaigns, and diaspora outreach activities, states can accord a higher meaning to return by framing it as a patriotic duty or a contribution to national rejuvenation (Cohen and Kranz 2015). In this way, returning is not merely an economic or familial choice, but a political mission that serves a moral and collective purpose.

Of course, state initiatives do not always succeed in influencing return decisions. Significant

²The migration experience may fundamentally alter one's lifestyle, worldview, and social relations in both destination and home countries in ways that are impossible to fully anticipate in advance. In other words, there is an element of radical uncertainty—or “unknown unknowns”—inherent in the migration decision: individuals are not only uncertain about the conditions in the destination but also how they will interpret and value those conditions after arrival. This makes it virtually impossible to optimize expected utility in a strictly rational sense (Hechtlinger et al. 2024).

gaps sometimes exist between the home country's official goals and discourses and the diaspora's perceptions of the concrete challenges involved in the return process and post-return life (Boccagni 2011; Cohen and Kranz 2015). For mobilization to be effective, the state must find credible ways to communicate its messages and align political rhetoric with the personal concerns and aspirations of potential returnees. We argue that one strategy is to work through insiders within the targeted community. Compared to external state agents, insiders are typically more attuned to the specific needs and concerns of their peers. They can help the state identify individuals with return potential and reframe official messages in language and narratives that resonate more widely within the community.³

The social embeddedness of insiders enhances their credibility in the eyes of community members. Research has shown that when individuals form opinions about unfamiliar or uncertain issues, they tend to rely on the views of others who share similar social and demographic characteristics (Festinger 1954). Persuasion is more effective when the communicator is perceived as relatable or similar to the recipient (Berscheid 1966; Brock 1965). By this logic, a call to return is more compelling when delivered not by distant government officials, but by trusted and respected members in one's social and professional circle. Such insider-led mobilization can be particularly important for highly skilled professionals, whose occupational identity often forms a core part of their social identity (Gaillard and Gaillard 1997). When professional peers are seen planning a return or actively engaging with the home government, their actions provide social proof of the home state's sincerity, helping to reduce the uncertainty that surrounds what is otherwise a high-risk and high-stakes decision.

Taken together, our argument is that state influence can play a significant role in shaping the return decisions of highly skilled individuals. This influence, however, hinges on the state's ability to project a positive image and communicate its promises credibly to the targeted community. In this process, bridging insiders—those who are both aligned with the state and trusted by their

³There are many reasons why some insiders in the diaspora community may become politically aligned with the home state. Some may be driven by an ideological conviction; others may see such alignment as a way to pursue personal ambitions; and yet others may become aligned because of state's targeted recruitment effort.

professional peers—often serve as crucial intermediaries.

US-Trained Chinese Scientists at Historical Crossroads

Sending students abroad to study science and technology has been a long-standing practice in China's modernization project. It began under the late Qing Dynasty with the Chinese Educational Mission (1872–1881), which sent 120 young boys to study in the New England region (Bieler 2003). In 1908, the U.S. Congress remitted roughly half (\$12 million) of America's share of the Boxer indemnity to create a preparatory school in Beijing, which sponsored over 1,200 Chinese students to study in the U.S. (Fairbank and Goldman 2006). The flow of Chinese students to America was interrupted by the War of Resistance Against Japan (1931–1945) but gained new momentum toward the end of the war. In 1943, the Kuomintang (KMT) government launched the Overseas Study Education Plan (留学教育方案) with the goal of creating a talent reserve for post-war reconstruction. The plan aimed to send 1,000 government-funded students and 1,000 self-funded students (with foreign exchange support) abroad each year for five years (Kong 2005, 99). In addition to government funding, non-governmental and foreign scholarships—such as those from the U.S. State Department, private foundations, and American universities—were also available to support Chinese students pursuing overseas studies (Fairbank 2005). By 1949, it was estimated that approximately 3,500 to 5,000 Chinese students were studying in the U.S., with about 80% specializing in science or engineering (Wang and Du 2013, 8). They constituted the largest group of international students in the U.S. at that time (Chen 2022, 30).

The defeat of the KMT government in the Chinese Civil War and the subsequent founding of the People's Republic of China in 1949 placed overseas Chinese students at a historic crossroads, as they now faced a choice between returning to a China under a different regime and remaining abroad.⁴ The U.S. government initially did not restrict the travel of Chinese nationals, and the

⁴For Chinese students in the U.S. at the time, the most natural alternative to returning to mainland China was to stay in the United States. There was also the option of returning to the KMT-controlled Taiwan or to Hong Kong. The number of individuals who took the latter option cannot be precisely determined but was likely limited, given the highly precarious geopolitical conditions of these two places throughout the 1950s.

decision to return or remain was left to the students themselves. The first wave of returns to China occurred immediately following the founding of the PRC (1949–1950). After the outbreak of the Korean War, the U.S. government, citing national security concerns, prohibited Chinese students in science and engineering from returning to mainland China. The travel ban was lifted after the Geneva Conference in November 1954 and a second wave of return migration ensued. This wave ended in the late 1950s, when the CCP launched the Anti-Rightist Campaign, in which many intellectuals became targets of political attacks. Between 1949 and 1958, a total of more than 1,800 students and scholars returned to China from the United States (Wang et al. 2023). These returnees later played a central role in building China’s research capabilities and leading its most strategically important technological programs. For example, among the 23 individuals recognized for their outstanding contributions to China’s nuclear weapon and satellite programs, 10 had earned their graduate degrees in the U.S. and returned between 1949 and 1956. As of 2014, 8 of the 25 recipients of the Highest Science and Technology Award were post-1949 returnees from the U.S. (Cheng et al. 2015).

Both the PRC government’s official discourse and many returnees’ public narratives portray returning as a natural choice driven by unwavering patriotism and attachment to the homeland. However, a closer look at the historical context suggests that the decision to go back to a newly established communist regime was neither obvious nor uncontested. To begin with, given the vast economic and technological disparities between the U.S. and China, returning meant relinquishing a high salary, a comfortable lifestyle, and access to a well-supported research environment. In addition, there was considerable uncertainty among overseas students about the political orientations and policy priorities of the new communist government. At the time, the majority of the Chinese students studying abroad came from urban, affluent families in the Yangtze or the Pearl River Delta regions—areas that were strongholds of the defeated KMT.⁵ Many students held politically liberal

⁵As shown in Figure F.1, most Chinese students in the U.S. graduated from China’s prestigious national and Christian universities, which were located in large cities and charged high tuition fees (Liang et al. 2017). The 1948 survey of Chinese students in the U.S. suggest that over 70% of them grew up in cities and the most common occupations of their fathers were businessmen, professionals, and government officials (Huang 2010).

views and were generally supportive of KMT rule.⁶ According to a 1948 survey of 660 Chinese students in the U.S., 18% of respondents supported the complete elimination of the communists as a precondition for peace in China, while only 2.7% of the respondents were in favor of a CCP-controlled government (Huang 2010). In short, overseas Chinese students at the time were not naturally predisposed to supporting the CCP; many may have even viewed the new regime with suspicion or hostility, seeing it as a threat to personal freedom and private property.

Organizations and Strategies of CCP Overseas Mobilization

We argue that the CCP's overseas mobilization efforts played a critical role in enabling the large-scale return of U.S.-trained students and scholars to the PRC. The main organizational vehicle for this mobilization campaign was the Association of Chinese Scientific Workers in U.S.A. (ACSW), a nationwide body founded by underground CCP members and activists with the specific goal of encouraging scientific talent to return to mainland China. As early as the 1940s, the CCP's Southern Bureau—under the leadership of Zhou Enlai and Dong Biwu—had begun sending trusted underground party members abroad through education and exchange programs. These individuals were tasked with conducting United Front work (统战工作) among Chinese students and professionals while receiving advanced technical and scientific training in the U.S. (Peng 2009, 317-318).⁷ Under their leadership, a number of informal reading groups and discussion societies were formed in major cities such as Pittsburgh, Chicago, Minneapolis, and New York during the late 1940s, and these informal groups later coalesced into several regional organizations for Chinese scientific workers.⁸ In June 1949, 50 delegates from 13 regional organizations convened a

⁶Students were required to pledge allegiance to the KMT government before going abroad, regardless of whether they received funding directly from the government or not (Chen 2022, 33–34).

⁷Notable members of this group included Xu Ming (徐鸣), Xue Baoding (薛葆鼎), Hou Xianglin (侯祥麟), and Ji Suhua (计苏华). These individuals joined the CCP during the War of Resistance Against Japan or even earlier. Their primary political mission, as articulated by Zhou Enlai, was to “mobilize Chinese intellectuals in the United States—especially senior scientific and technical experts—to return and contribute to the construction of the homeland” (Yu 2011, 5).

⁸In early 1949, a group of students in Chicago—led by physicist Ge Tingsui and joined by underground party members such as Hou Xianglin and Ji Suhua—established the Central U.S. Scientific Workers' Association 美中科协. Around the same time, similar branches also emerged in New York and Philadelphia. These local initiatives then

meeting in Pittsburgh to formally establish the national ACSW. Although a voluntary, non-political association in public, the ACSW maintained active ties with the CCP through the party's "Small Leadership Group in the U.S." (中共在美工作领导小组), which was directly overseen by Zhou Enlai (Wang 2024, 57). The two consecutive executive secretaries of the association, Hou Xianglin and Sun Shaoqian, were both underground CCP members. In the summer of 1949, Xu Ming, another underground CCP agent, traveled to China to brief Zhou Enlai about the situation of Chinese students abroad and relayed Zhou's instructions of mobilizing students' return back to the ACSW leadership (CPPCC 1999).⁹

Following its founding, the ACSW entered a phase of rapid expansion. Within less than a year, it had grown to more than 700 members and 32 regional branches. By June 1950, ACSW branches had been established at major research universities—including Yale, Caltech, Columbia, and the University of Illinois—and extended across 22 states, making it the largest and most influential organization of Chinese international students in the U.S. at the time (Chinese Academy of Sciences 2000). The association organized academic seminars, political discussion groups, and social gatherings in which participants discussed current affairs and circulated books and periodicals from China. At a time when international communication was slow and costly, these activities helped overseas students stay informed about the situation in China and eased their uncertainty about the policy directions of the new communist government (Pei 2022).¹⁰ In addition to in-person activities, the ACSW also published a monthly newsletter, *The ACSW Bulletin* (留美科协通讯), with a country-wide circulation of 800 to 1,000 copies per issue. The *Bulletin* featured not only domestic news and policy updates, but also letters from individuals who had already returned. These personal communications provided firsthand accounts of the scientific opportunities available in China and emphasized the patriotic responsibilities of Chinese scientists to contribute to

coordinated through a series of preparatory meetings to launch a national body.

⁹The organizing role of the CCP was hidden to most of the ordinary members of the ACSW, many of whom believed that it was a spontaneous organization. He Guozhu, a non-CCP activist in the ACSW, recalled that he only learned that the ACSW was established by CCP underground agents after returning to China (Wang and Du 2013).

¹⁰For example, in a letter in December 1949, Li Jiaye, a psychology graduate student at UCLA, wrote, "[W]hat troubles us the most right now is that we cannot get access to books from China. All the information and understanding we have about the country comes from newspapers—one is the *Ta Kung Pao* from Hong Kong, and the other is the *Chinese Daily News* from San Francisco. We truly hope we can receive newspapers from Beijing (Yan 2021, 167)."

national development, encouraging those still in the U.S. to seriously consider returning. (Cheng et al. 2015).¹¹

To broaden its influence within the Chinese students and scholars community, the ACSW adopted an inclusive and pragmatic approach. Its activities were open to anyone who was considering a return to the PRC, regardless of their membership status or prior political persuasion (CPPCC 1999). The association also sought to extend its reach through shared academic and research interests. It sponsored over 20 “academic small groups” (学术小组) in fields such as water resources, metallurgy, and power engineering. These groups provided spaces for individuals with similar research interests and expertise to connect both intellectually and socially. For instance, the water resource small group, founded by several ACSW members studying hydraulic engineering in Iowa (Chen 2022, 116), organized visits to the Tennessee Valley Authority and explored how such large-scale projects might be adapted to the context of postwar China. Similarly, the metallurgy group was formed by researchers specializing in metallurgy and metal physics (Wu, Ling, and Pang 2015, 53–54), and one of their major initiatives was to coordinate the translation of important scientific textbooks and reference works into Chinese (Chen 2022, 115–116). These discipline-based activities played a vital role in connecting Chinese scientists scattered across different regions of the United States,¹² and helped foster among participants a collective sense that their expertise was urgently needed in the newly founded People’s Republic (Fu 1998).

The dissolution of ACSW was a direct consequence of rising political pressure in the U.S. The outbreak of the Korean War significantly intensified suspicion toward Chinese nationals and Communist-linked organizations. As the ACSW came under increasing federal scrutiny, several of its active members were summoned for questioning and even detained (CPPCC 1999).¹³ On September 28, 1950—just days after the passage of the McCarran Internal Security Act, which required communist-linked organizations to register with the United States Attorney General—

¹¹Two influential letters written by Zhu Guangya and Hua Luogeng in 1950 are presented in Appendix F.

¹²One example was the friendship between Chen Nengkuan 陈能宽 and Shi Changxu 师昌绪, two renowned material scientists who graduated from Yale and Notre Dame, respectively. See Shi (2000, 493) for details.

¹³For a de-classified report on the ACSW by the Central Intelligence Agency (CIA), see <https://www.cia.gov/readingroom/docs/CIA-RDP82-00457R007700340012-4.pdf>

ACSW's leadership issued an emergency notice to announce the dissolution of all branches, abruptly ending a two-year mobilization operation (Chen 2022, 132).

Empirical Design

While many scientists who returned to China recalled interactions with the ACSW when they were in the U.S., systematic evidence on the role of ACSW in mobilizing returnees remains limited. Several empirical challenges contribute to this gap. The first is sample selection: evaluating mobilization effectiveness requires information on not only those who returned to China, but also those who chose not to return, despite exposure to ACSW's activities. The second challenge is measuring the intensity of ACSW's mobilization activities, which were often covert or informal in nature. The third issue is self-selection. Individuals already inclined to return may have been more likely to join the ACSW in order to find peers and obtain information and support. This creates a problem of reverse causality between organizational affiliation and return decisions. In this section, we outline our empirical strategy to evaluate the effect of ACSW's mobilization while addressing these challenges.

Data and Measures

Data on Chinese Ph.D. Graduates in the United States

We constructed an original dataset that encompasses the universe of Chinese Ph.D. students who graduated from U.S. academic institutions during the 1940s and 1950s. The dataset is based on a unique bibliographic source, *A Guide to Doctoral Dissertations by Chinese Students in America (1905-1960)* (Yuan 1961). Compiled by Yuan Tongli, a renowned bibliographer who worked at multiple Chinese libraries and the Library of Congress, the *Guide* provides a complete catalog of doctoral dissertations submitted by Chinese students in American universities. It records a total of 2,789 dissertations, of which 1,525 were defended between 1945 and 1958. Authors of these dissertations obtained their doctoral degrees from 98 universities across 37 states. For each

dissertation, the *Guide* records the author’s name, year of birth, graduation year, academic institution, and the title of their dissertation. Based on the title, we further classified graduates into 10 fields of study: humanities, social sciences, economics, biology, chemistry, agriculture, engineering, physics, mathematics, and other miscellaneous sciences. In the main analysis, we excluded graduates who studied humanities, social sciences, and economics,¹⁴ and focus only on those who specialized in natural sciences and mathematics ($n = 1,165$).

Information about Chinese Ph.D. graduates’ return decisions was obtained from two sources. For those who returned after the founding of the PRC, we relied on information from the “Collection of Academic History Materials for Senior Scientists (老科学家学术成长资料采集工程)” project. This project was initiated by China Association for Science and Technology in 2011 with the goal of preserving the personal histories and academic achievements of accomplished elder scientists. Researchers from this project conducted extensive interviews with elder scientists themselves as well as their colleagues and family members, and consulted a wide range of archival records to recover their full educational and migration trajectories. Based on the information collected, Wang et al. (2023) published the name list and short biographies of 1,810 Chinese scientists who returned from the U.S. to the PRC between 1949 and 1965. For the pre-PRC period, we used *A Comprehensive Survey of Foreign-Trained Scientific and Technical Personnel Who Returned to China (1840-1949)* (Ma 2007), which provides information on 1,118 students who studied sciences or engineering and returned to China between 1946 and 1949. We combined these two sources and matched the records with Yuan’s dissertation catalog based on name and field of study. Of the 1,165 Ph.D. graduates in the main dataset, the matched record shows that 345 (29.6%) eventually returned to China, with the vast majority of the returns (313) occurring after 1949. This rate of return is considerably higher than the contemporary rate among Chinese doctoral recipients (around 10–15%) (Finn 2014, 6). We conducted a series of validation tests to show that this sample of Ph.D. graduates are broadly representative of Chinese students in the U.S at the time in terms of

¹⁴We exclude social sciences because graduates in these fields might have additional political and ideological concerns with working and teaching under a communist regime. As an extension, we also estimate the impact of ACSW on social scientists’ return and, as expected, find virtually zero effect (Table D.7).

both their geographic distribution in the U.S and provincial origins from China (Online Appendix C).

Measuring the CCP Mobilization Intensity

To measure the intensity of state mobilization, we focus on the geographical reach and membership size of the ACSW. We obtained the full list of ACSW members (N = 714) as of March 1950 along with the contact addresses of all 32 of its branches (CPPCC 1999). For each Ph.D graduate in our sample, we measure exposure to the ACSW by counting the total number of ACSW members (excluding the person him/herself) in the branch located closest to that person's doctoral institution, provided that the branch was located within a 30-mile radius; otherwise, exposure is coded as zero. Among the 98 universities in our sample, 49 had an ACSW branch within 30 miles (mean distance = 4.3 miles). These branches had an average of 27.65 members, with a standard deviation of 18.8. In later analyses, we adopted a more granular measure based on the number of ACSW members in a graduate's field of study. Fields with the highest ACSW membership included engineering, chemistry, and physics, whereas psychology, animal and plant science, and environmental studies had the fewest members.

Measuring Other Push and Pull Factors

McCarthyism and Racial Discrimination In addition to the mobilization efforts of ACSW, many other factors might have influenced Chinese students' decisions to return. We included in the regression model a series of commonly discussed push and pull factors in the migration literature. To begin with, the period we study was marked by widespread racial discrimination and the rise of McCarthyism, both of which might have pushed Chinese students to leave the U.S. In terms of racial discrimination, although the notorious Chinese Exclusion Act was repealed in 1943, *de facto* discrimination still persisted in housing, employment, and education.¹⁵ Although

¹⁵Recollections of returned scientists revealed mixed experiences regarding racial discrimination in the U.S. For example, Shen Shanjiong recalled that he was unable to rent an apartment due to racial discrimination, but the issue was quickly resolved after the university intervened. Concerned about the legal consequences of racial discrimination, the landlord ended up treating him favorably. This made Shen believe that the United States was "relatively reasonable

precise measures of contemporaneous racial attitudes toward the Chinese are difficult to obtain, we construct a proxy for historical anti-Chinese sentiment by combining two existing datasets (Lew-Williams 2018; Pfaelzer 2008). Our measure is a binary indicator that takes the value of 1 if any anti-Chinese violent incident was recorded in a county in the 1880s by either datasets, and 0 otherwise.¹⁶ 11.25% of the counties in our sample has witnessed at least one incident of anti-Chinese violence in the past.

The growing influence of McCarthyism during the late 1940s and 1950s might have also contributed to the perceived insecurity of Chinese students and scholars. To measure the influence of McCarthyism, we rely on the annual reports of the House Un-American Activities Committee (HUAC). The HUAC was established in 1938 with the primary goal of investigating alleged subversive activities by individuals and organizations suspected of having communist, fascist, or other “un-American” ties (Bentley 1971). During the 1940s and 1950s, the HUAC conducted hundreds of investigations on suspected communist activists and sympathizers, mainly in the entertainment industry and higher education (Tan and Wang 2024). Its annual reports disclose faculty members and students who were summoned to its mass hearings due to suspected communist ties. We collect and aggregate this information at the university–year level to create a dichotomous measure for whether any faculty member or student was investigated by the HUAC in a given university–year pair. About 3.9% of the university-year pairs and 21.4% of universities had at least one active HUAC investigation between 1945 and 1958.

Socioeconomic Factors We collect a range of data to capture non-political influences on students’ return decisions. First, one’s return decision may be affected by the availability of opportunities in China. To measure this, we obtain a list of 1,027 senior Chinese scientists who were born before 1910 (Xu et al. 2007) and calculate, for each academic field, the percentage of scientists who had left mainland China upon the establishment of the PRC. This ratio serves as a proxy for

and willing to correct faults once pointed out” (Xiong 2014, 60–61).

¹⁶Pfaelzer (2008) records the sites of anti-Chinese expulsions and attempted expulsions during 1885–1887. Lew-Williams (2018) collects events of various anti-Chinese violent incidents (e.g., roundups, purges, murder, job discrimination and work violence, demonstrations and rallies, and government actions and judicial verdicts) during 1880–1890.

field-specific shortage of scientific talent in the home country. Second, in the pre-Internet era, the cost of transportation and information access likely played a significant role in shaping the timing and scale of return migration. We compute the minimum distance between one’s university and the 25 most populous U.S. cities, with the assumption that information access and international travel was easier when one lived near transportation hubs.¹⁷ Moreover, we draw on the U.S. census to obtain several county-level characteristics that reflect local receptiveness to highly educated foreign talent, including the percentages of foreigners and college-degree holders (Haines et al. 2010).

Visual Patterns

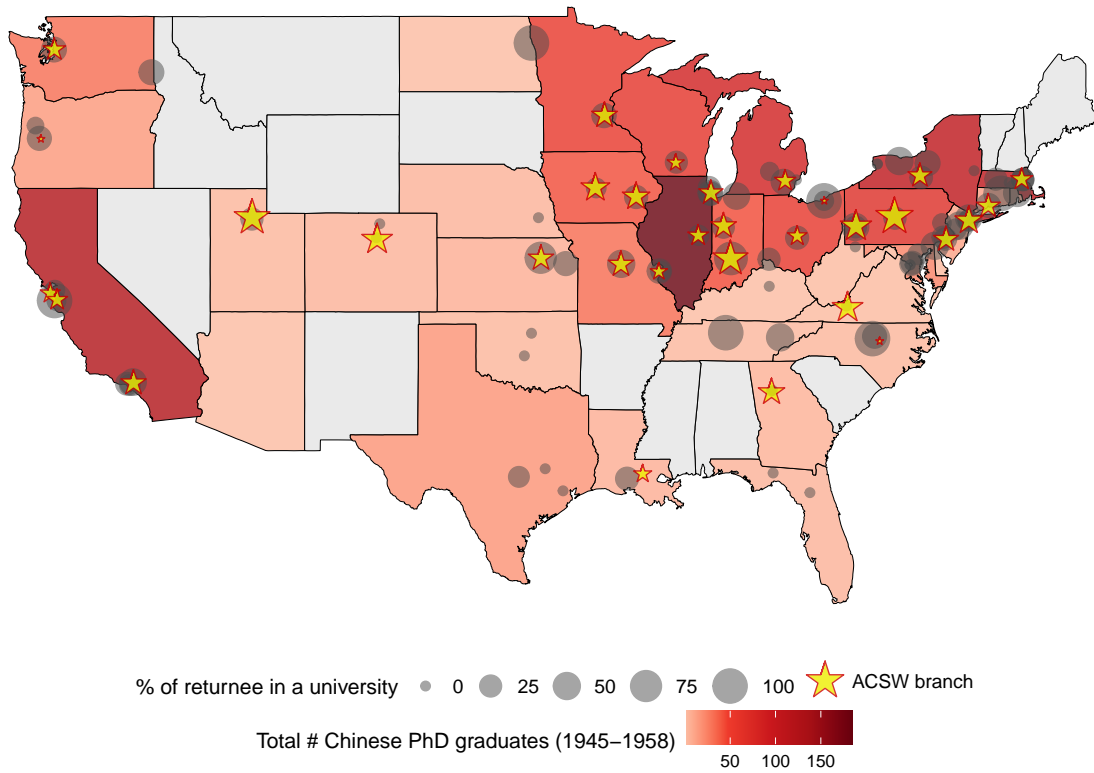
Before proceeding to the systematic regression analyses, we begin by presenting a visual summary of the data. Figure 1 shows the spatial distribution of ACSW branches and the variation in average return rates among Chinese students between 1949 and 1958. The branches are denoted by star signs with the size corresponding to the percentage of ACSW members among all Chinese Ph.D. graduates from universities affiliated with that branch. The gray circles represent the percentage of Chinese students at each university who returned to the PRC. The red shade corresponds to the number of Chinese Ph.D. graduates in a state. When juxtaposing ACSW locations and return rates, we observe a clear spatial correlation: return rates tend to be higher in localities where an ACSW branch was present and had a larger membership. This pattern provides preliminary support to our claim that the ACSW played a role in shaping students’ return decisions.

Estimation

We combine all data sources into a person–year dataset. The units of observations are individual Chinese STEM Ph.D graduates. For each individual, the observation period begins in the year of graduation and ends either in the year when they returned to China or in 1958, whichever

¹⁷These cities include: New York City, NY; Chicago, IL; Philadelphia, PA; Los Angeles, CA; Detroit, MI; Baltimore, MD; Cleveland, OH; St. Louis, MO; Washington, DC; Boston, MA; San Francisco, CA; Pittsburgh, PA; Milwaukee, WI; Houston, TX; Buffalo, NY; New Orleans, LA; Minneapolis, MN; Cincinnati, OH; Seattle, WA; Kansas City, MO; Newark, NJ; Dallas, TX; Indianapolis, IN; Denver, CO; San Antonio, TX.

Figure 1: ACSW Presence and Return Rates of Chinese Doctoral Graduates



Note: This figure shows the spatial distribution of Ph.D. graduates, returnees, and ACSW branches. The regional branches of the ACSW are denoted by yellow stars with the size corresponding to the percentage of ACSW Ph.D. members among all Ph.D. graduates. The gray circles indicate the percentage of Chinese students who returned to the PRC in a given university. Darker red shade is associated with a greater number of graduates in each state.

occurs earlier. Our main empirical strategy is a difference-in-differences (DD) design that leverages variations in the ACSW’s membership across universities and in its activeness over time:

$$\text{Return}_{i,m,u,c,s,g,t} = \beta \text{ACSW}_u \times \mathbf{1}[1949 \leq t \leq 1950] + X'_{i,m,u,c,s,g,t} \Gamma + FE + \varepsilon_{i,m,u,c,s,g,t}, \quad (1)$$

where $\text{Return}_{i,m,u,c,s,g,t}$ is a binary variable that takes the value of 1 if Ph.D. graduate i , studying in field m , who graduated from university u in county c of state s in year g , returned to China in year t , and 0 otherwise. ACSW_u denotes the membership size in university u ’s affiliated ACSW branch, and $\mathbf{1}[1949 \leq t \leq 1950]$ indicates the active years of the ACSW (1949–1950). The key treatment variable in our design is the interaction of these two terms. This estimation strategy essentially compares the changes in return rates of students in universities with varying levels of ACSW exposure before, during, and after the period when ACSW was active (1949–1950). Later we also adopted a more flexible specification to estimate whether there is any lingering influence of the ACSW after it was formally dissolved. $X_{i,m,u,c,s,g,t}$ is a set of covariates that may confound the effect of ACSW on return. In addition to the aggregate-level factors discussed above, we also obtain several other individual-level characteristics from information available in Yuan’s dissertation catalog, including gender (inferred from the individual’s name), age at graduation, and whether the individual included an English name in his/her dissertation record. We treat English name as an indicator of one’s propensity to assimilate (Fouka 2020). While direct information on graduates’ socioeconomic backgrounds is unavailable, we construct a proxy index based on the uniqueness of Chinese characters in one’s name (Bao 2021), with the assumption that those with more distinctive names are more likely to come from affluent and well-educated families.

FE includes a series of fixed effects that account for unobserved confounders associated with calendar year, graduation year, state, county, university, and academic field.¹⁸ The key quantity of interest is coefficient β , which represents the effect of exposure to ACSW on return, holding

¹⁸Since return is a permanent, non-reversible state, this FE specification is essentially a survival model with duration fixed effects (Beck, Katz, and Tucker 1998). We adopt a linear specification here because it is easier to interpret the coefficients and to flexibly control for unobservable heterogeneity across various dimensions. The main results hold when we use alternative specifications, such as logit or Cox proportional hazards models (Table D.1).

constant all other individual- and aggregate-level conditions. The standard errors are clustered at the university level throughout the analysis.

Results

Baseline Results

The baseline DD results are shown in Table 1. Column 1 begins with a model that includes calendar year, graduation year, and state FEs along with a set of push- and pull-covariates. Column 2 replaces state FEs with more granular county FEs. Column 3 introduces university FEs and Column 4 further adds FEs for field of study. Across all the specifications, we see that the coefficients for the DD estimator remain consistently positive and statistically significant, suggesting that exposure to ACSW members and activities increased the likelihood of graduates returning to the PRC. Substantively, one additional ACSW member in the branch affiliated with an individual's university increases the probability of return by approximately 0.3 percentage points. Given that the average membership size for an ACSW branch is 27.65, the estimate implies that, compared to a university where no ACSW branch was present, having an average-sized ACSW on or near campus is associated with a 8.3 percentage points increase in the year-on-year probability of return. This amounts to a 146% increase from the baseline rate (5.7%).

The control variables provide additional insights into other factors that shape return decisions. Notably, we see that the coefficients for having an English name are consistently negative and statistically significant, suggesting that individuals with stronger propensity to assimilate culturally are less likely to return. Younger and female graduates are also less likely to return compared to their older and male counterparts, possibly reflecting differing perceptions of opportunity in China across age and gender groups. Moving from individual traits to broader contextual variables, we find fewer consistent patterns. Both the number of HUAC investigations in a university and the percentage of scientists who left mainland China in a field register positive correlations with the likelihood of return, but the estimates are too imprecise to establish meaningful statistical

Table 1: The Impact of ACSW on Returning to PRC: DD Estimates

| | DV = Return to China | | | |
|---|----------------------|---------------------|---------------------|---------------------|
| | (1) | (2) | (3) | (4) |
| # ACSW members \times ACSW active years (1949–1950) | 0.003** (0.001) | 0.003** (0.001) | 0.003** (0.001) | 0.003** (0.001) |
| English name | -0.037** (0.005) | -0.040** (0.006) | -0.039** (0.006) | -0.046** (0.008) |
| Name uniqueness | -0.005 (0.004) | -0.004 (0.004) | -0.004 (0.004) | -0.005 (0.005) |
| Graduation age | 0.003** (0.001) | 0.002** (0.001) | 0.002* (0.001) | 0.004** (0.001) |
| Female | -0.013 (0.008) | -0.014 (0.009) | -0.014 (0.009) | -0.022 (0.014) |
| HUAC investigation | 0.009 (0.012) | 0.003 (0.014) | 0.003 (0.014) | 0.002 (0.013) |
| % Scientists left China after 1949 | 0.044 (0.082) | 0.050 (0.094) | 0.060 (0.094) | |
| # 1945–1948 Chinese PhD graduates | 0.001 (0.001) | 0.000 (0.001) | | |
| Ivy league | 0.001 (0.013) | 0.023 (0.018) | | |
| Distance to big cities | -0.006 (0.004) | -0.008 (0.012) | | |
| Anti-Chinese incident | -0.031 (0.020) | | | |
| % Foreigners | 0.520 (0.500) | | | |
| % College degrees | -0.253 (0.315) | | | |
| Year & Graduation Year FE | ✓ | ✓ | ✓ | ✓ |
| State FE | ✓ | | | |
| County FE | | ✓ | | |
| University FE | | | ✓ | ✓ |
| Major FE | | | | ✓ |
| Observations | 5584 | 5582 | 5582 | 5560 |
| Adjusted R ² | 0.09 | 0.09 | 0.09 | 0.11 |

Note: This table shows the estimation results from Equation 1. Standard errors clustered at the university level are reported in parentheses. FE = fixed effects. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

significance. Likewise, the historical prevalence of anti-Chinese incidents and local demographic composition also appear to have limited influence on return decisions.

Parallel Trends and Robustness Check

The identification strategy for the DD estimation hinges on a key parallel trends assumption: graduates from universities with ACSW branches would have exhibited similar counterfactual trends in return rates as those from institutions without such branches. While the parallel trends assumption cannot be definitively proven, we can test for notable pre-treatment trends by estimating a flexible event-study model with the following specification:

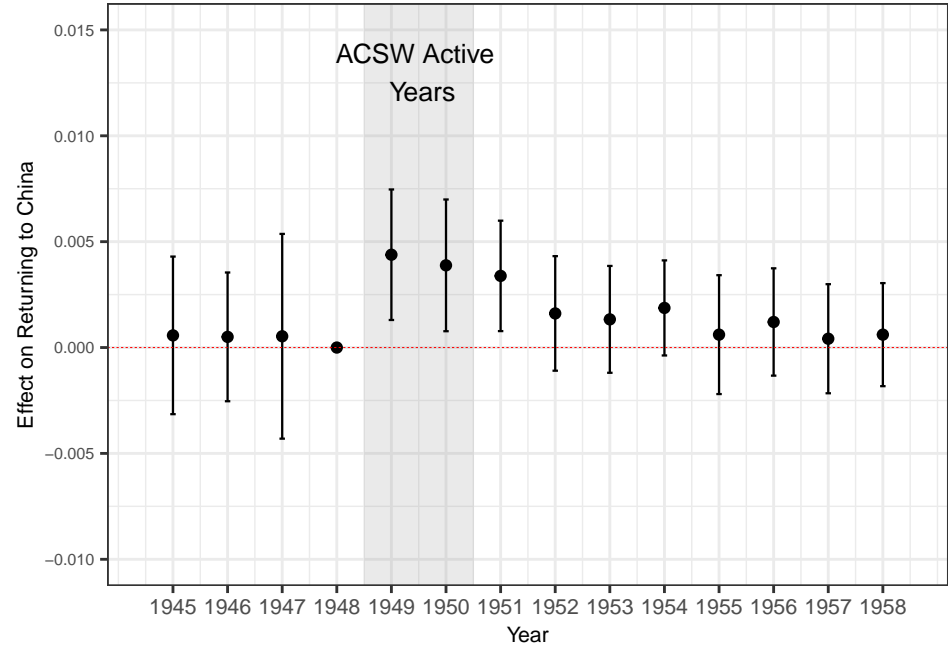
$$\text{Return}_{i,m,u,c,s,g,t} = \sum_{t \neq 1948} \beta_t \text{ACSW}_u \times D_t + X'_{i,m,u,c,s,g,t} \Gamma + FE + \varepsilon_{i,m,u,c,g,t}, \quad (2)$$

where all other variables remain the same as in Equation 1, except that D_t now represents a series of year-specific indicator variables from 1945 to 1958. This more flexible specification allows us to examine whether the β_t coefficients for the pre-ACSW years are close to zero, as expected under the parallel trends assumption of no time-varying confounders. We plot the estimated β_t coefficients in Figure 2, using 1948—the year immediately preceding ACSW’s establishment—as the reference category. The results support the validity of our identifying assumption: the differences in the likelihood of graduates returning to China between universities with high and low numbers of ACSW members remain largely stable during the pre-ACSW years, but diverge considerably once the ACSW was founded and became active (1949–1950). Notably, following the organization’s dissolution in late 1950, the effect quickly diminishes and effectively disappears during the second wave of returns (1955–1956). This pattern provides reassuring evidence that our findings are highly specific to regions and periods characterized by *active* ACSW presence.¹⁹

In addition to testing the parallel trends assumption, we also conducted an extensive set of checks to ensure the robustness of our results. The details of these tests can be found in Appendix D. To briefly summarize: We show that our results are robust to alternative specifications, such as Logit, survival analysis, and LASSO (Table D.1). We also show that the main results hold across

¹⁹One concern for the pre-trend testing is the lack of statistical power due to the limited variation in the pre-treatment period. We conducted a sensitivity analysis using the confidence set method proposed by Rambachan and Roth (2023). The results in Figure D.1 show that our estimates have enough power to rule out that realistic parallel trends violations could explain a nonzero estimated causal effect.

Figure 2: The Impact of ACSW on Returning to China: DD Estimates (Event Study)



Note: This figure visualizes the coefficients and the 95% confidence interval from the event study results of Equation 2. The baseline year is set to 1948, the year before ACSW became active. The specification includes university, major, and year fixed effects and individual controls. Standard errors are clustered at the university level. Full numeric results are shown in Table D.9.

several different measures of ACSW presence (Tables D.2 and D.3) and are robust to the inclusion of interactions between important push and pull factors and the active period of ACSW as additional controls (Table D.4). To address the concern that ACSW membership may simply reflect the size of the local Chinese student body, we use the membership size of the Chinese Students Christian Association in North America (CSCA)—another large Chinese student organization not directly controlled by underground CCP members—as a placebo measure and do not find similar results (Table D.5). Finally, we conducted several subsample analyses to show that our findings continue to hold when we restrict the sample to individuals who were not ACSW members themselves (Table D.6) and across various scientific fields and geographic regions (Figure D.3).

Addressing the Endogeneity Issues with Instrumental Variables Analysis

An important concern with our finding is that the size of ACSW membership may be a result of self-selection: Universities where many Chinese graduates were already inclined to return will have a larger ACSW membership and more activities. We implement an instrumental variables analysis to address this issue. Prior to the establishment of the national ACSW in June 1949, regional branches had already been formed on the campuses of 13 universities with a total of 87 initial members.²⁰ Our IV design focuses on Ph.D. graduates from institutions *other than* these 13 as the sample, and the instrument computes each institution’s combined exposure to the 13 ACSW early branches, measured by the sum of each branch’s initial membership size weighted by an inverse function of its distance to that institution. The intuition behind this instrument is that the influence of the early ACSW branches is likely to first reach geographically adjacent areas through informal contact and personal networks, and this proximity-induced diffusion is plausibly exogenous to university-level characteristics that might affect Chinese students’ attitude toward the CCP or the intention to return in general. In Online Appendix, we provide supporting evidence

²⁰We collect the location and membership information of the initial branches from Pei (2022). The 13 universities are Columbia University, Harvard University, New York University, University of Chicago, Ohio State University, Purdue University, University of Illinois at Urbana-Champaign, University of Iowa, University of Michigan, University of Minnesota, University of Pennsylvania, University of Pittsburgh, University of Washington, and Yale University.

that the instrument is not correlated with the size, political orientations, or prior return rates of the Chinese student body in a university (Table D.8).

We estimate a two-stage-least-square (2SLS) model with the following specification:

$$\begin{aligned} \text{ACSW}_u \times \mathbf{1}[1949 \leq t \leq 1950] &= \rho \text{Early Branch Exposure}_u \times \mathbf{1}[1949 \leq t \leq 1950] \\ &+ X'_{i,m,u,c,g,t} \Gamma + FE + \varepsilon_{i,m,u,c,g,t}, \end{aligned} \quad (3)$$

$$\begin{aligned} \text{Return}_{i,m,u,c,g,t} &= \beta_{IV} \widehat{\text{ACSW}}_u \times \mathbf{1}[1949 \leq t \leq 1950] \\ &+ X'_{i,m,u,c,g,t} \Gamma + FE + \varepsilon_{i,m,u,c,g,t}. \end{aligned} \quad (4)$$

The instrument, *Early Branch Exposure*_u, is defined as $\sum_{k \in K} \text{ACSW}_k \times \omega(\text{distance}_{u,k})$, which sums over the product of the initial membership size in an early branch k and an (inverse) function of its distance to university u for all 13 early branches. This instrument takes a higher value when a university is located near early ACSW branches with a large membership. We compute the distance weight ω using linear, normal and exponential functions, giving progressively more weights to closer branches.²¹

The IV results are reported in Table 2. Across all three distance specifications, the coefficients of the interactive treatment term are consistently positive and statistically significant. The estimates suggest an effect size of 0.4 to 0.6 percentage points increase in the probability of return for one additional ACSW member, which is larger than the original DD estimates. The IV results bolster our confidence that the observed influence of ACSW is causal. Even for universities that had greater ACSW presence only by virtue of being located closer to the organization's initial sites of operation, they still tend to witness more returns by Chinese Ph.D. graduates after 1949 than institutions located elsewhere.

²¹The linear, normal, and exponential weighting functions are $(1 + \text{distance}_{u,k})^{-1}$, $\exp(-\text{distance}_{u,k})$, and $\exp(-(\text{distance}_{u,k})^2/2)$, respectively.

Table 2: IV Estimation Results

| | DV = Return to China | | |
|---|----------------------|---------------------|---------------------|
| | (1) | (2) | (3) |
| # ACSW members \times ACSW active years (1949–1950) | 0.004** (0.001) | 0.006* (0.003) | 0.005* (0.002) |
| English name | -0.036** (0.011) | -0.036** (0.011) | -0.036** (0.011) |
| Graduation age | 0.004** (0.001) | 0.004** (0.001) | 0.004** (0.001) |
| Female | -0.030* (0.013) | -0.030* (0.013) | -0.030* (0.013) |
| Name uniqueness | -0.013* (0.006) | -0.013* (0.006) | -0.013* (0.006) |
| HUAC investigation | 0.003 (0.020) | 0.003 (0.020) | 0.003 (0.020) |
| Year & Graduation Year FE | ✓ | ✓ | ✓ |
| University FE | ✓ | ✓ | ✓ |
| Major FE | ✓ | ✓ | ✓ |
| Observations | 3759 | 3759 | 3759 |
| Adjusted R ² | 0.01 | 0.01 | 0.01 |
| Kleibergen-Paap F stats | 6.80 | 2.75 | 3.67 |
| First-stage F stats | 9.29 | 5.83 | 6.08 |
| Distance discount | Linear | Normal | Exponential |

Note: This table shows the second-stage results from the instrumental variable analysis. Standard errors clustered at the university level are reported in parentheses. The sample for the IV analysis excludes all students from the 13 universities with early ACSW branches and all graduates who were activists in the ACSW. FE = fixed effects.

⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Mechanisms

Role of Professional Networks

The preceding analysis has shown that ACSW exposure has a positive impact on the likelihood of Chinese STEM Ph.D. graduates returning to their home country. We now turn to examining the specific channels through which ACSW mobilization worked. Both our theoretical argument and discussion of the historical context suggest that professional networks might have played a significant role in mediating the state's call for return. To test this empirically, we compute separately the numbers and percentages of ACSW members who are (1) in the same university and *the same field of study* as the student and (2) those who are in the same university but belong to *a different*

field, and include both in regression models.²²

Table 3 presents the results. The first two columns use the original classification of 10 academic fields and the third and fourth columns use a broader classification with only four fields.²³ We see that the estimates for the effect of ACSW members in one's own field are positive and statistically significant. The result from Column 1 suggests that exposure to one additional same-field ACSW member increases an individual's probability of returning by about 0.9 percentage points, which is over four times larger than the baseline estimate reported in Table 1. In contrast, the influence of ACSW members from other fields is small and statistically nonsignificant. This pattern is consistent with our claim that professional connections among fellow scientists within the same field were crucial conduits that enabled mobilization to grow in scale and scope.

Table 3: Mobilization Effect by Same vs. Different Fields

| | DV = Return to China | | | |
|--|------------------------|------------------------|-----------------------|-----------------------|
| | (1) Narrow field | (2) Narrow field | (3) Broad field | (4) Broad field |
| # ACSW members (same field) × ACSW active years (1949–1950) | 0.009* (0.004) | | 0.009** (0.003) | |
| # ACSW members (different field) × ACSW active years (1949–1950) | 0.002 (0.001) | | -0.000 (0.002) | |
| % ACSW members (same field) × ACSW active years (1949–1950) | | 0.409** (0.134) | | 0.205* (0.099) |
| % ACSW members (different field) × ACSW active years (1949–1950) | | 0.009 (0.054) | | 0.009 (0.066) |
| Graduation Year FE | ✓ | ✓ | ✓ | ✓ |
| University–Major FE | ✓ | ✓ | ✓ | ✓ |
| Major–Year FE | ✓ | ✓ | ✓ | ✓ |
| Controls | ✓ | ✓ | ✓ | ✓ |
| Observations | 5555 | 5555 | 5555 | 5555 |
| Adjusted R ² | 0.19 | 0.19 | 0.19 | 0.19 |

Note: Standard errors clustered at the university-major level are reported in parentheses. Controls include English name, graduation age, female, name uniqueness, and HUAC investigation. The broadly defined fields are: (1) Science: Math, Physics, Biology, Chemistry, etc; (2) Engineering; (3) Agriculture; and (4) Medicine. Full results with the estimates of controls are shown in Table D.10. FE = fixed effects. ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

²²This specification exploits variation within a university-major pair and can disentangle whether the influence was specific to ACSW members who were professional insiders (same field of study) or generally applicable to all types of members.

²³The broad classification is based on KMT's 1943 Overseas Study Education Plan (Liu 1980, 2083–2087).

Aspiration or Ability?

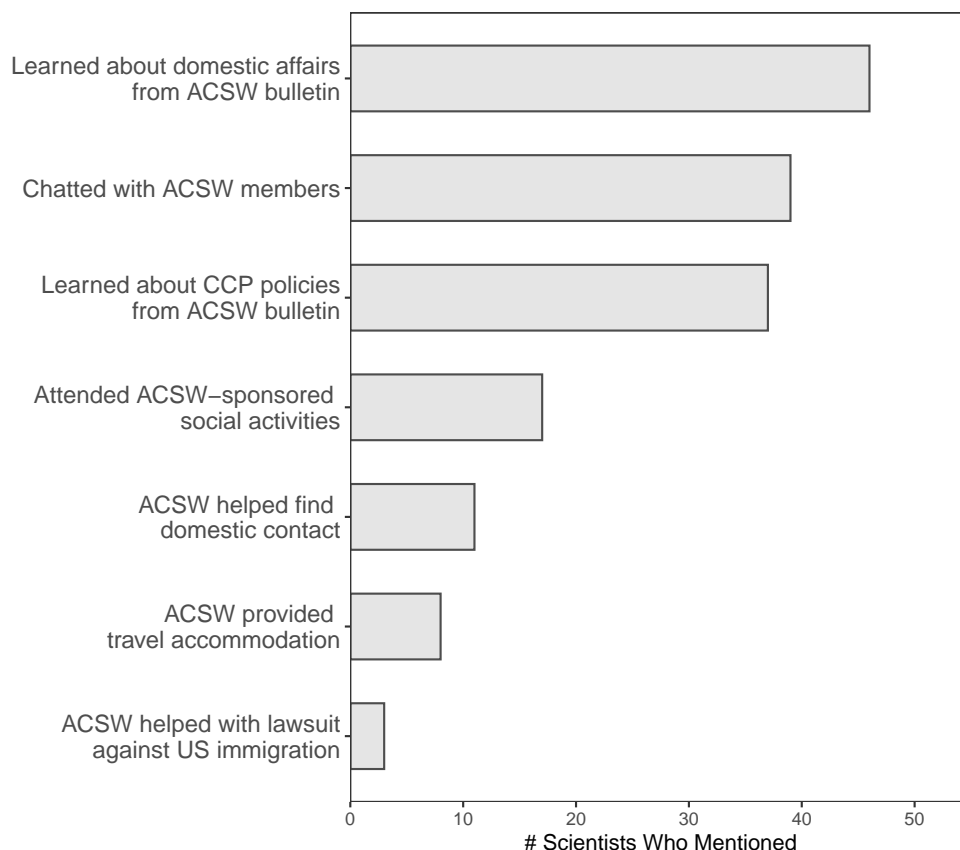
Having examined the specific channel of mobilization, we now turn to a related question: What exactly did the ACSW do to induce Chinese students to return? A useful framework for understanding migration (and return) incentives distinguishes between two aspects: the *aspiration* to migrate and the *ability* to migrate (Carling 2002; Haas 2021). In the context of our study, aspiration refers to the subjective evaluation of whether returning to the PRC is preferable to staying in the U.S., while ability concerns the political, financial, and logistical feasibility of return. The ACSW could plausibly influence both dimensions: On the aspiration side, the association's publications and local activities likely helped cultivate students' patriotic sentiment, reinforce feelings of nostalgia for home and family, and improve their perceptions of life and career prospects under the new communist regime. On the ability side, there is also evidence that the association helped students overcome practical barriers to return. For example, the San Francisco branch collaborated with the University of California Chinese Students' Association to establish a return service center for Chinese students. Some ACSW activists also sought to develop contacts in Hong Kong in order to help students obtain transit visas (Chen 2022, 117–118).

To investigate the relative importance of these two aspects, we turn to first-hand accounts by returnees. We collected from multiple sources an exhaustive set of autobiographies, memoirs, and interviews of 107 scientists who returned from the U.S. to China after 1949.²⁴ Of the 107 individuals, 63 (58.9%) provided detailed accounts of how they interacted with the ACSW while in the United States. We conducted a comprehensive review of all incidents of interactions and classified them into 7 distinct categories: learning about CCP policies from the ACSW bulletin; (1) learning about China's domestic affairs from ACSW bulletin; (2) chatting with ACSW members; (3) attending ACSW-sponsored social activities; (4) using ACSW to find domestic contact; (5)

²⁴The materials are collected from three sources. The majority of them are from an oral history project sponsored by the China Association for Science and Technology to preserve the professional histories and intellectual genealogies of senior scientists (<https://www.mmcs.org.cn/kxjfc/kxjfc/index.html>). This project has so far published 53 book-length biographies of scientists who studied in the U.S. after 1945. Second, in the late 1980s, two historians interviewed 37 elder scientists who returned from the U.S. after 1949 (Wang and Du 2013). Third, 42 scientists wrote memoirs on the experience of returning to the PRC, which are available in CPPCC (1999).

using ACSW to find travel accommodation; (6) and receiving ACSW assistance in filing lawsuits against U.S. immigration authorities. We provides illustrative examples of each category from returnees’ own recollections in Table E.1.

Figure 3: Mechanism of ACSW influence: Aspiration vs. Ability



Note: This figure shows the frequency of different types of interactions with the ACSW as reported in senior scientists’ autobiographies and memoirs. Sources: National Museum for Modern Chinese Scientists (<https://www.mmcs.org.cn/kxjfc/kxjfc/index.html>), Wang and Du (2013), and CPPCC (1999)

Figure 3 displays the frequency distribution (in descending order) of interactions with ACSW, based on in senior scientists’ recollections. Over 40 scientists reported that they learned about domestic affairs and CCP policies from the ACSW bulletin. About 20 to 30 scientists mentioned that they chatted with ACSW members or participated in ACSW-sponsored social activities. In contrast, only 11 and 8 scientists reported having used the ACSW to find domestic contact and travel accommodations, respectively, and just 3 recalled receiving assistance with lawsuits against U.S immigration authorities. Overall, the distribution suggests that the ACSW’s mobilization was

more motivational than material—primarily increasing students’ willingness to return rather than their ability to do so.

Conclusion

One of the major obstacles to development in the Global South is to attract and retain highly skilled individuals, who are often tempted to stay in the developed world because of greater economic return to their skills and better living conditions (Bhagwati and Hamada 1974). In this article, we demonstrate that the imbalance in international human capital flows can be partially addressed through deliberate and targeted actions by the state. Using the PRC’s post-1949 return campaigns as an example, we provide evidence that state-sponsored mobilization was a critical factor behind the swift and large-scale return of US-trained scientists to China after the end of the Chinese Civil War. In particular, our empirical analyses suggest that exposure to the ACSW, the key organization entrusted by the party-state with the task of repatriating overseas talent, significantly increased Chinese Ph.D. graduates’ probability of return. Additional quantitative and qualitative evidence further reveal how overseas mobilization worked: the state’s call for return was most effective on graduates when it was communicated through activists who were also their professional peers, and that mobilization affected one’s aspiration to return more than ability.

While this study focuses on a specific historical episode involving the United States and China, the general findings regarding the patterns and drivers of elite return migration have parallels in other settings. Several other countries have also adopted similar practices of interpersonal mobilization when seeking to repatriate highly skilled nationals abroad. In the 1960s, both Indian and Iranian authorities sent returned professionals to the U.S to discuss the problems of return with prospective returnees (Bovenkerk 1974, 15). In Israel, a country with a long-standing interest in attracting high-skilled diaspora for domestic development, agencies such as the Ministry of Immigration Absorption collaborate closely with non-state actors—including think tanks, advocacy groups, and migrant associations—to identify, contact, and facilitate the return of highly skilled

individuals (Cohen 2016). In South Korea, Yoon (1992, 5) notes that the return of scientists, engineers, and other intellectuals from abroad was “not a spontaneous phenomenon but...a concerted state activity.” When the South Korean government launched its bid for talented overseas nationals under the Park Chung-Hee administration, it faced a similar challenge of credibly communicating information about domestic opportunities to a skeptical diaspora. To overcome this, the government’s information campaign had to rely on the close-knit interpersonal networks within the Korean diaspora community, which were “more effective than any other system that could have been devised” (Hentges 1975, 117–118).

The finding that state-sponsored mobilization can influence international talent flows has mixed welfare implications. On the one hand, it suggests that brain drain from relatively poor to wealthy nations is not irreversible. With sufficient political will and coordinated efforts, developing countries can successfully repatriate overseas talent and increase their human capital stock, even in the face of less favorable material conditions. These reverse flows of talent will likely contribute to a more equitable distribution of scientific expertise across nations and facilitate the creation of transnational epistemic communities in key policy areas (Haas 2021).²⁵ On the other hand, however, it should be noted that successful talent *mobilization* does not necessarily translate into effective talent *utilization*. A great historical irony in the Chinese case is that many of the scientists and scholars who were persuaded to return by the CCP’s overseas mobilization campaign soon witnessed a very different face of political mobilization at home. Throughout the Maoist era, successive waves of political and ideological campaigns led to the persecution, imprisonment, and even deaths of many repatriated scientists. The very knowledge and expertise that had once made them valuable targets of recruitment was discredited and even denounced as a sign of po-

²⁵Returned scientists had generally adopted the thinking, research methods, and academic standards of modern Western science and adhered to these methods and standards after their return. During the early reform era (late 1970s to 1980s), many returned scientists participated in the formulation of China’s medium- and long-term science and technology development plans and advised the central government on major science policy decisions. Some of them used their former connections to reestablish academic exchange with the West and actively pushed for China’s participation in major international collaborative projects. Li Zhengwu (Ph.D., Caltech) actively supported China’s participation in the International Thermonuclear Experimental Reactor (ITER) (Zhu 2015); Tu Guangzhi (Ph.D., Minnesota) played a vital role in securing the state leadership’s support for joining the International Ocean Discovery Program (IODP), whose work carries important implications for maritime sovereignty and climate governance (Xu 2010).

litical unreliability in mass-based struggles. It is not implausible to speculate that many returnees would have made greater contributions to science and humanity had they stayed abroad during that tumultuous period.

Our analysis of the specific mobilization channels offers important lessons on how states can most effectively engage with highly skilled academic or professional communities. Unlike the general public, members of these communities typically possess a strong sense of ingroup identity and enjoy a relatively autonomous standing in society due to the specialized knowledge and expertise they command. The more effective way for political authorities to influence such communities is not through direct mandate but indirect mobilization mediated by professional insiders—activists who identify with the state’s political agenda but are also familiar with the norms and preferences of the professional community. Accomplished and influential professionals are therefore important allies that the state must court and form coalitions with if it wishes to exert meaningful influence, and the least productive strategy would be to target and alienate those prominent figures who have the ability to sway the views of their peers.

This implication is especially relevant today, as competition over science and technology re-emerges as a central issue in U.S.-China relations (Jia et al. [2024](#); Xie et al. [2023](#)). Compared to the 1950s, the gap in economic development and research infrastructure between the two countries has narrowed considerably, and U.S. political commitment to retaining Chinese students and scientists has waned. If state-sponsored mobilization could attract scientific talent then, it may be even more effective now. In this context, how political authorities manage the relationship with the scientific community may prove crucial in determining the direction of talent flows. Ultimately, winning the race for talent requires states to build trust and affinity with scientists, not to treat them as potential spies or adversaries—for the migration of the mind often follows the pull of the heart.

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Online Appendix

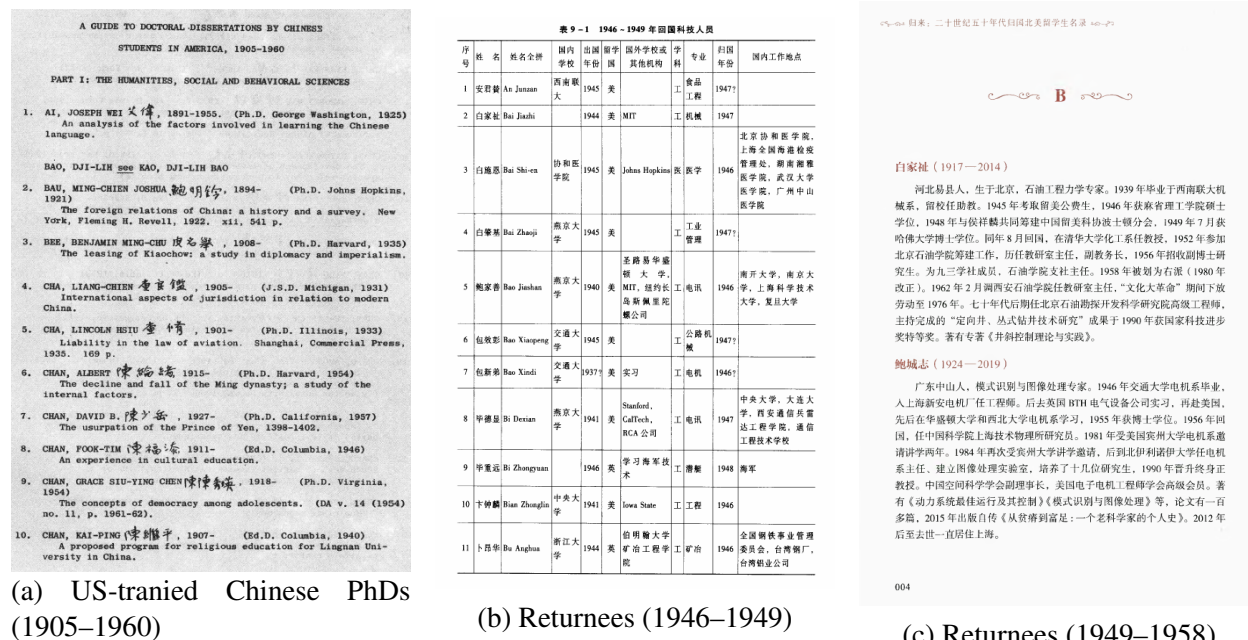
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A Data Construction

Figure A.1 shows how we construct our data for main analysis. As shown in Figure A.1a, we first digitize Yuan (1961) to obtain the list of all US-trained Chinese PhDs. We then match the list with the returnees shown in Figure A.1b and A.1c, from Ma (2007) and Wang et al. (2023) and manually check the accuracy. For those who came back to China multiple times from 1945 to 1958, we document whether he/she eventually came back to China after 1949.

Figure A.1: US-trained Chinese PhDs and the Returnees



B Summary Statistics

Table B.1: Data Sources and Summary Statistics

| | Observations | Mean | SD | Min | Max |
|---|--------------|--------|-------|--------|--------|
| Panel A: Students | | | | | |
| Name uniqueness | 1,496 | 3.061 | 0.889 | 1.272 | 6 |
| Graduation year | 1,521 | 1,952 | 3.398 | 1,945 | 1,959 |
| Graduation after 1949 | 1,521 | 0.853 | 0.354 | 0 | 1 |
| Back to China before 1949 | 1,521 | 0.0533 | 0.225 | 0 | 1 |
| Back to China after 1949 | 1,521 | 0.247 | 0.432 | 0 | 1 |
| Distance to ACSW | 1,521 | 1.291 | 1.908 | 0 | 6.447 |
| ACSW member | 1,521 | 0.163 | 0.370 | 0 | 1 |
| Number of co-major ACSW members | 1,521 | 5.016 | 6.988 | 0 | 34 |
| Existence of co-major ACSW members | 1,521 | 0.683 | 0.465 | 0 | 1 |
| English name | 1,521 | 0.280 | 0.449 | 0 | 1 |
| Female | 1,521 | 0.0874 | 0.283 | 0 | 1 |
| Major: Humanities | 1,521 | 0.0763 | 0.266 | 0 | 1 |
| Major: Social Sciences | 1,521 | 0.0953 | 0.294 | 0 | 1 |
| Major: Engineering | 1,521 | 0.242 | 0.428 | 0 | 1 |
| Major: Economics & Management & Business | 1,521 | 0.0664 | 0.249 | 0 | 1 |
| Major: Biology & Chemistry | 1,521 | 0.241 | 0.428 | 0 | 1 |
| Major: Agriculture | 1,521 | 0.0874 | 0.283 | 0 | 1 |
| Major: Physics | 1,521 | 0.0828 | 0.276 | 0 | 1 |
| Major: Other sciences | 1,521 | 0.108 | 0.311 | 0 | 1 |
| Ivy league | 1,521 | 0.191 | 0.393 | 0 | 1 |
| Top 10 universities | 1,521 | 0.166 | 0.372 | 0 | 1 |
| Top 30 universities | 1,521 | 0.335 | 0.472 | 0 | 1 |
| Panel B: Universities | | | | | |
| Num. of Chinese faculty members | 33 | 16.21 | 29.83 | 1 | 109 |
| Latitude | 98 | 39.54 | 3.719 | 29.64 | 47.92 |
| Longitude | 98 | -87.46 | 14.53 | -123.3 | -71.09 |
| Num. of Chinese Ph.D. graduates (1854 – 1953) | 81 | 21.46 | 39.05 | 1 | 208 |
| Num. of Chinese students (1854 – 1953) | 80 | 205.0 | 331.9 | 3 | 1,930 |
| HUAC investigation | 98 | 0.214 | 0.412 | 0 | 1 |
| Panel C: Counties | | | | | |
| % Urban Population | 79 | 64.99 | 15.46 | 26.60 | 86.60 |
| % Foreigners | 79 | 1.882 | 1.410 | 0.200 | 4.500 |

Note: This table shows the summary statistics for the data.

C Validation Tests

Table C.1: Validation Test I

| | DV = Num. of Ph.D. graduates after 1954 | |
|--------------------------------|---|--------------------|
| | (1) | (2) |
| Num. of PhDs (1854–1953) | 0.125** (0.021) | |
| Num. of students (1854–1953) | | 0.016** (0.002) |
| Mean of the dependent variable | 4.86 | 4.97 |
| Num. of universities | 80 | 78 |
| Adjusted R ² | 0.57 | 0.64 |

Note: Data on the number of PhDs and students during 1854–1953 are from (China Institute in America 1954). Data on the number of PhD graduates after are from (Yuan 1961). Standard errors clustered at the state level are reported.

⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

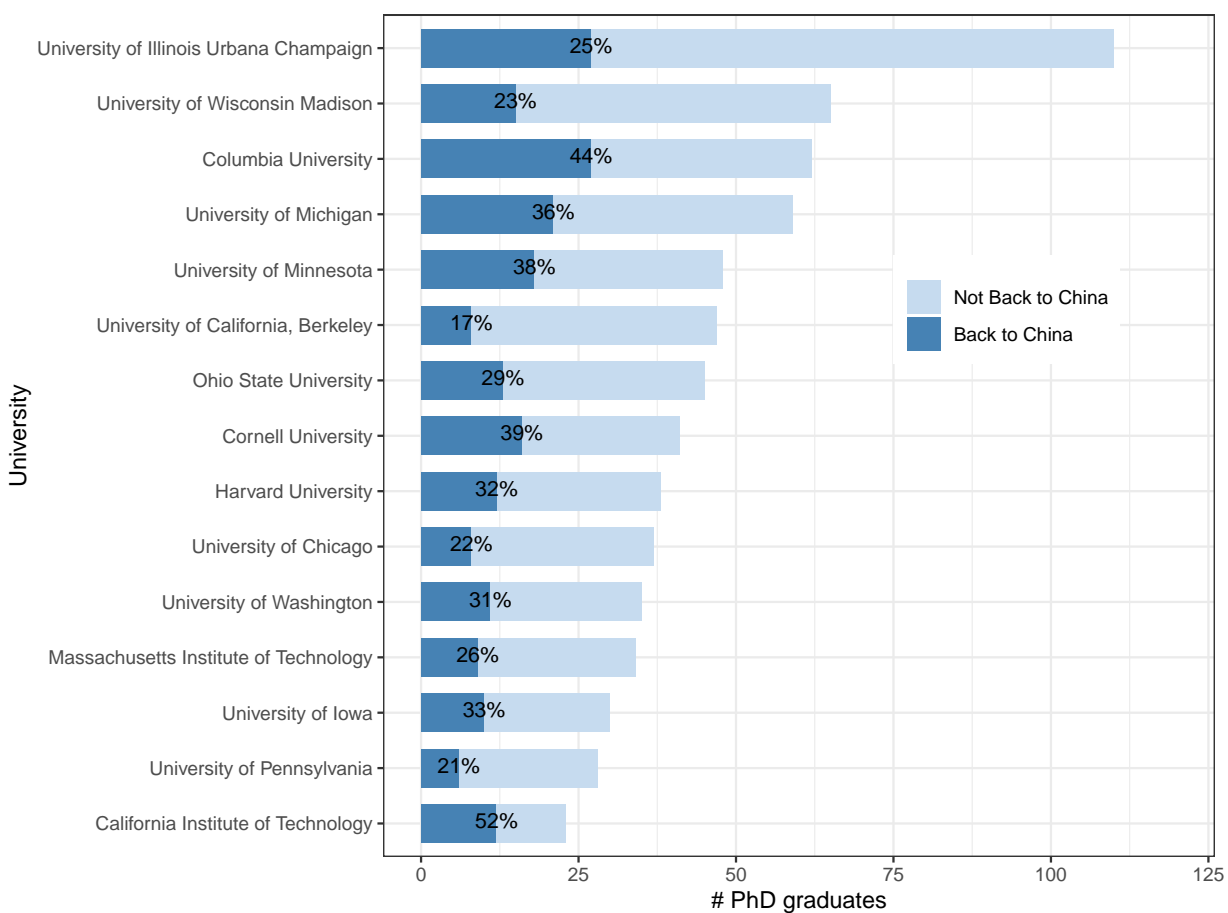
Table C.2: Validation Test II

| | DV = Num. of all students (1854–1953) |
|--------------------------------|---------------------------------------|
| | (1) Full sample |
| Num. of returned students | 22.956** (6.280) |
| Mean of the dependent variable | 491.07 |
| Num. of Provinces | 28 |
| Adjusted R ² | 0.31 |

Note: Data on the number of PhDs and students during 1854–1953 are from China Institute in America (1954). Data on the number of returned students are from Wang et al. (2023). Standard errors clustered at the state level are reported.

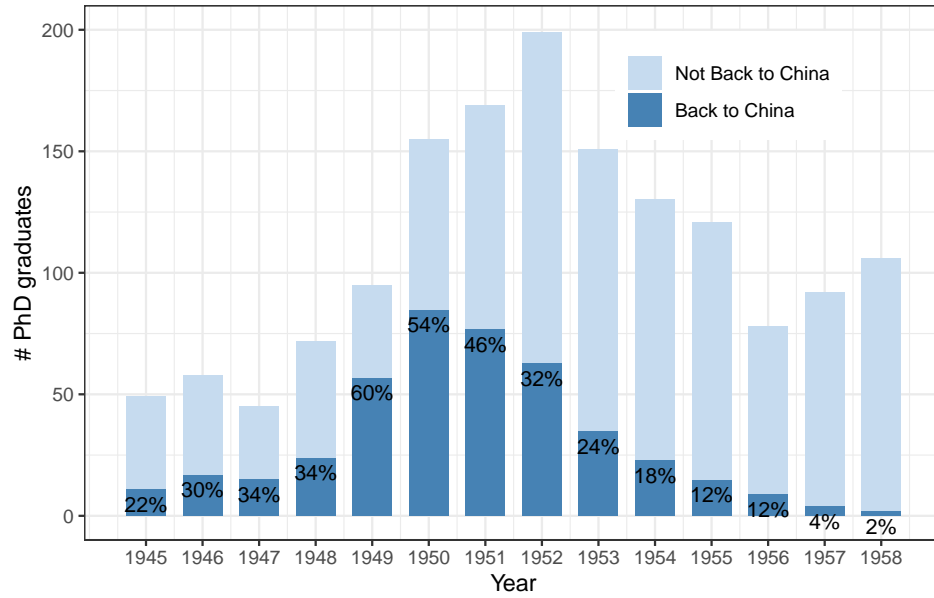
⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Figure C.1: PhD Graduates and Returnees among Universities with Top 15 Highest Number of Chinese PhD graduates



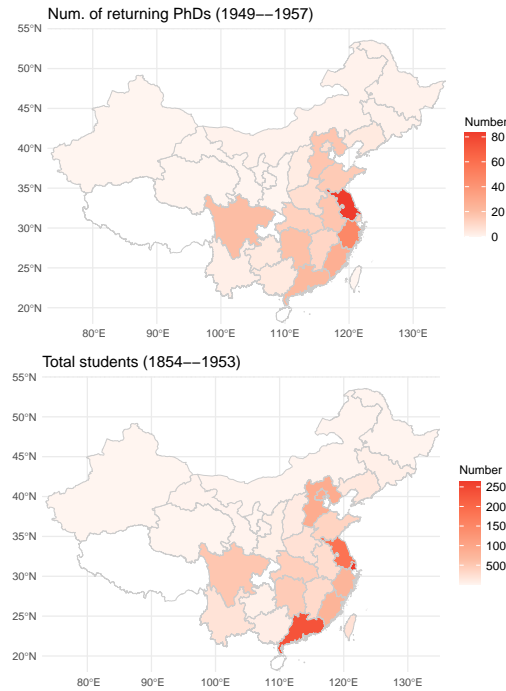
Note: This figure shows the number of PhD graduates and the percentage of returnees among the top 15 universities with the highest number of Chinese PhD graduates.

Figure C.2: PhD Graduates and Returnees by Year



Note: This figure shows the number of PhD graduates and the percentage of returnees from 1945 to 1958.

Figure C.3: Hometown Provinces of Returnees



Note: This figure shows the hometown provinces of returning US-trained Chinese PhD graduates and the number of US-trained Chinese students between 1854 to 1953. Data are from Wang et al. (2023) and China Institute in America (1954).

D Robustness Checks

Table D.1: The Impact of ACSW on Returning to China: DD Estimates (Alternative specifications)

| | DV = Return to China | | |
|---|----------------------|---------------------|---------------------|
| | (1) LASSO | (2) Logit | (3) Cox |
| # ACSW members \times ACSW active years (1949–1950) | 0.004** (0.001) | 0.033** (0.005) | 0.024** (0.006) |
| English name | -0.046** (0.006) | -1.250** (0.203) | -2.204** (0.449) |
| Graduation age | | 0.051* (0.020) | 0.066+ (0.034) |
| Female | | -0.440 (0.321) | -0.487 (0.564) |
| # 1945–1948 Chinese PhD graduates | -0.001 (0.001) | | |
| HUAC investigation | | -0.291+ (0.172) | -0.126 (0.192) |
| % Scientists left China after 1949 | | | |
| Ivy league | | | |
| Distance to big cities | | | |
| Anti-Chinese incident | | | |
| % Foreigners | | | |
| % College degrees | | | |
| Year & Graduation Year FE | ✓ | ✓ | |
| State FE | ✓ | | |
| County FE | | | |
| University FE | | ✓ | ✓ |
| Major FE | | ✓ | ✓ |
| Observations | 5585 | 5269 | 5262 |
| Adjusted R ² | | 0.13 | 0.08 |

Note: This table shows the results of robustness checks from LASSO, Logit, and Cox proportional hazard models, respectively. FE = fixed effects.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Table D.2: The Impact of ACSW on Returning to China: DD Estimates (Alternative Measures of Treatment)

| | DV = Return to China | | | |
|---|----------------------|---------------------|---------------------|---------------------|
| | (1) | (2) | (3) | (4) |
| # ACSW members \times ACSW active years (1949–1950) | 0.003** (0.001) | | | |
| 1[ACSW members] \times ACSW active years (1949–1950) | | 0.072+ (0.037) | | |
| % ACSW members \times ACSW active years (1949–1950) | | | 0.210** (0.042) | |
| # ACSW returnees \times ACSW active years (1949–1950) | | | | 0.005** (0.001) |
| English name | -0.046** (0.008) | -0.047** (0.008) | -0.046** (0.008) | -0.047** (0.008) |
| Graduation age | 0.004** (0.001) | 0.004** (0.001) | 0.004** (0.001) | 0.004** (0.001) |
| Female | -0.022 (0.014) | -0.021 (0.014) | -0.020 (0.014) | -0.022 (0.014) |
| HUAC investigation | 0.002 (0.013) | 0.002 (0.014) | 0.000 (0.013) | 0.002 (0.013) |
| Year & Graduation Year FE | ✓ | ✓ | ✓ | ✓ |
| University FE | ✓ | ✓ | ✓ | ✓ |
| Major FE | ✓ | ✓ | ✓ | ✓ |
| Observations | 5560 | 5560 | 5560 | 5560 |
| Adjusted R ² | 0.11 | 0.11 | 0.11 | 0.11 |

Note: This table shows the results of robustness checks that use alternative measures of the treatment. FE = fixed effects.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Table D.3: The Impact of ACSW on Returning to China: DD Estimates (Alternative Matching between Universities and the ACSW)

| | DV = Return to China | |
|---|----------------------|---------------------------------|
| | (1) | (2) |
| | Minimum distance | ACSW branches located in campus |
| # ACSW members \times ACSW active years (1949–1950) | 0.003** (0.001) | 0.002* (0.001) |
| English name | -0.046** (0.007) | -0.047** (0.008) |
| Name uniqueness | -0.005 (0.005) | -0.005 (0.005) |
| Graduation age | 0.004** (0.001) | 0.004** (0.001) |
| Female | -0.021 (0.014) | -0.020 (0.014) |
| HUAC investigation | 0.001 (0.013) | 0.003 (0.014) |
| Year & Graduation Year FE | ✓ | ✓ |
| University FE | ✓ | ✓ |
| Major FE | ✓ | ✓ |
| Observations | 5560 | 5560 |
| Adjusted R ² | 0.11 | 0.11 |

Note: This table shows the results of robustness checks that match universities with ACSW branches with either minimum distance or the existence of branches located in the campus. FE = fixed effects.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Table D.4: The Impact of ACSW on Returning to China: DD Estimates (Allowing for Time-varying Effects of Push and Pull Factors)

| | DV = Return to China | |
|---|----------------------|---------------------|
| | (1) | (2) |
| # ACSW members \times ACSW active years (1949–1950) | 0.003** (0.001) | 0.003** (0.001) |
| English name | -0.046** (0.008) | -0.043** (0.007) |
| Graduation age | 0.004** (0.001) | 0.003** (0.001) |
| Female | -0.022 (0.014) | -0.018 (0.012) |
| HUAC investigation | 0.002 (0.013) | 0.000 (0.013) |
| English name \times ACSW active years (1949–1950) | | -0.058+ (0.033) |
| Graduation age \times ACSW active years (1949–1950) | | 0.008 (0.006) |
| Female \times ACSW active years (1949–1950) | | -0.024 (0.051) |
| Name uniqueness \times ACSW active years (1949–1950) | | -0.003 (0.017) |
| # 1945–1948 Chinese PhD graduates \times ACSW active years (1949–1950) | | -0.002 (0.003) |
| % Scientists left China after 1949 \times ACSW active years (1949–1950) | | 0.473 (0.292) |
| Distance to big cities \times ACSW active years (1949–1950) | | -0.013 (0.013) |
| Ivy league \times ACSW active years (1949–1950) | | -0.018 (0.027) |
| Anti-Chinese incident \times ACSW active years (1949–1950) | | -0.040 (0.065) |
| % Foreigners \times ACSW active years (1949–1950) | | -0.953 (1.365) |
| % College degrees \times ACSW active years (1949–1950) | | 0.046 (0.785) |
| Year & Graduation Year FE | ✓ | ✓ |
| University FE | ✓ | ✓ |
| Major FE | ✓ | ✓ |
| Observations | 5560 | 5557 |
| Adjusted R ² | 0.11 | 0.11 |

Note: This table shows the results of robustness checks that allow for time-varying effects of push and pull factors. FE = fixed effects.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Table D.5: The Impact of ACSW on Returning to China: DD Estimates (Placebo Test)

| | DV = Return to China | | | |
|---|----------------------|---------------------|---------------------|---------------------|
| | (1) | (2) | (3) | (4) |
| # ACSW members \times ACSW active years (1949–1950) | 0.003** (0.001) | 0.003** (0.001) | 0.003** (0.001) | 0.004** (0.001) |
| # CSCA members \times ACSW active years (1949–1950) | -0.007 (0.005) | -0.007 (0.005) | -0.006 (0.005) | -0.004 (0.004) |
| English name | -0.038** (0.006) | -0.040** (0.006) | -0.039** (0.006) | -0.046** (0.008) |
| Name uniqueness | -0.005 (0.004) | -0.004 (0.004) | -0.004 (0.004) | -0.005 (0.005) |
| Graduation age | 0.003** (0.001) | 0.002** (0.001) | 0.002* (0.001) | 0.004** (0.001) |
| Female | -0.012 (0.008) | -0.013 (0.009) | -0.014 (0.009) | -0.021 (0.014) |
| HUAC investigation | 0.009 (0.012) | 0.003 (0.014) | 0.004 (0.014) | 0.002 (0.013) |
| % Scientists left China after 1949 | 0.042 (0.082) | 0.048 (0.094) | 0.058 (0.095) | |
| # 1945–1948 Chinese PhD graduates | 0.001 (0.001) | 0.000 (0.001) | | |
| Ivy league | 0.001 (0.013) | 0.024 (0.019) | | |
| Distance to big cities | -0.005 (0.004) | -0.010 (0.012) | | |
| % Foreigners | 0.501 (0.484) | | | |
| % College degrees | -0.263 (0.313) | | | |
| Anti-Chinese incident | -0.030 (0.020) | | | |
| Year & Graduation Year FE | ✓ | ✓ | ✓ | ✓ |
| State FE | ✓ | | | |
| County FE | | ✓ | | |
| University FE | | | ✓ | ✓ |
| Major FE | | | | ✓ |
| Observations | 5584 | 5582 | 5582 | 5560 |
| Adjusted R ² | 0.09 | 0.09 | 0.09 | 0.11 |

Note: This table shows the results of robustness checks by examining the effects of the CSCA. FE = fixed effects.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Table D.6: The Impact of ACSW on Returning to China: DD Estimates (Exclude ACSW members)

| | DV = Return to China | | | |
|---|----------------------|---------------------|---------------------|---------------------|
| | (1) | (2) | (3) | (4) |
| # ACSW members \times ACSW active years (1949–1950) | 0.002* (0.001) | | | |
| I[ACSW members] \times ACSW active years (1949–1950) | | 0.039 (0.035) | | |
| % ACSW members \times ACSW active years (1949–1950) | | | 0.099+ (0.050) | |
| # ACSW returnees \times ACSW active years (1949–1950) | | | | 0.004* (0.002) |
| English name | -0.024** (0.006) | -0.025** (0.005) | -0.025** (0.006) | -0.024** (0.006) |
| Graduation age | 0.004** (0.001) | 0.004** (0.001) | 0.004** (0.001) | 0.004** (0.001) |
| Female | -0.006 (0.014) | -0.004 (0.013) | -0.005 (0.013) | -0.006 (0.014) |
| HUAC investigation hearings | 0.012 (0.012) | 0.012 (0.012) | 0.011 (0.012) | 0.012 (0.012) |
| Year & Graduation Year FE | ✓ | ✓ | ✓ | ✓ |
| University FE | ✓ | ✓ | ✓ | ✓ |
| Major FE | ✓ | ✓ | ✓ | ✓ |
| Observations | 4565 | 4565 | 4565 | 4565 |
| Adjusted R ² | 0.11 | 0.11 | 0.11 | 0.11 |

Note: This table shows the results of robustness checks that exclude graduates who were ACSW members. FE = fixed effects.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Table D.7: The Impact of ACSW on Returning to China: DD Estimates (Humanities and Social Sciences Majors)

| | DV = Return to China | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| | (1) | (2) | (3) | (4) |
| # ACSW members \times ACSW active years (1949–1950) | -0.0008 (0.0012) | -0.0004 (0.0011) | -0.0004 (0.0011) | -0.0001 (0.0011) |
| English name | -0.0379** (0.0069) | -0.0391** (0.0073) | -0.0412** (0.0078) | -0.0463** (0.0071) |
| Name uniqueness | -0.0026 (0.0043) | -0.0022 (0.0046) | -0.0018 (0.0047) | -0.0036 (0.0060) |
| Graduation age | 0.0004 (0.0007) | 0.0003 (0.0007) | 0.0005 (0.0007) | 0.0013* (0.0006) |
| Female | 0.0039 (0.0075) | -0.0021 (0.0077) | 0.0052 (0.0082) | 0.0190+ (0.0104) |
| HUAC investigation | -0.0072 (0.0068) | -0.0085 (0.0069) | -0.0065 (0.0068) | -0.0063 (0.0072) |
| % Scientists left China after 1949 | -0.0772 (0.0564) | -0.0678 (0.0506) | -0.0580 (0.0525) | |
| # 1945–1948 Chinese PhD graduates | 0.0004 (0.0011) | 0.0078* (0.0036) | | |
| Ivy league | 0.0087 (0.0230) | -0.2003+ (0.1051) | | |
| Distance to big cities | -0.0040 (0.0074) | 0.0952* (0.0464) | | |
| Anti-Chinese incident | -0.0864 (0.0554) | | | |
| % Foreigners | -0.1819 (0.3795) | | | |
| % College degrees | 0.2172 (0.3584) | | | |
| Year & Graduation Year FE | ✓ | ✓ | ✓ | ✓ |
| State FE | ✓ | | | |
| County FE | | ✓ | | |
| University FE | | | ✓ | ✓ |
| Major FE | | | | ✓ |
| Observations | 2064 | 2056 | 2054 | 2052 |
| Adjusted R ² | 0.08 | 0.07 | 0.07 | 0.09 |

Note: This table shows the results of DD estimates on the impact of ACSW on returning to China among students majoring in humanities and social sciences. FE = fixed effects.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Table D.8: Validity of the Instrumental Variable

| | (1) IV (Linear) | (2) IV (Normal) | (3) IV (Exponential) |
|---|--------------------|--------------------|-------------------------|
| # Chinese in the Communist Party of USA | 0.191 (0.199) | 0.103 (0.102) | 0.062 (0.060) |
| # Pre-1945 Chinese PhD graduates | -0.056 (0.043) | -0.039 (0.030) | -0.024 (0.017) |
| # 1945-1948 Chinese PhD graduates | 0.582 (0.446) | 0.349 (0.288) | 0.213 (0.173) |
| # 1945-1948 Chinese PhD returnees | -1.517 (1.475) | -0.934 (0.978) | -0.563 (0.583) |
| Ivy league | -1.978 (1.753) | -0.890 (1.080) | -0.565 (0.650) |
| % College degrees | 0.225 (15.773) | 3.451 (9.894) | 1.874 (5.917) |
| Anti-Chinese incident | 0.423 (0.468) | 0.276 (0.276) | 0.167 (0.167) |
| State FE | ✓ | ✓ | ✓ |
| # Universities | 86 | 86 | 86 |
| Adjust R ² | 0.44 | 0.36 | 0.38 |
| F-test stats of joint significance | 0.46 | 0.49 | 0.46 |

Note: This table shows correlations between the instrument variable and other potential confounders for universities without early branches of the ACSW. FE = fixed effects. F-test statistics fail to reject the null hypothesis that the coefficients of these potential confounders are zero.

⁺ $p < 0.1$, ^{*} $p < 0.05$, ^{**} $p < 0.01$ (two-tailed test).

Table D.9: Numeric Results for Dynamic DD Estimat

| | DV = Return to China |
|------------------------------|----------------------|
| | (1) |
| # ACSW members \times 1945 | 0.001 (0.002) |
| # ACSW members \times 1946 | 0.001 (0.002) |
| # ACSW members \times 1947 | 0.001 (0.002) |
| # ACSW members \times 1949 | 0.004** (0.002) |
| # ACSW members \times 1950 | 0.004* (0.002) |
| # ACSW members \times 1951 | 0.003* (0.001) |
| # ACSW members \times 1952 | 0.002 (0.001) |
| # ACSW members \times 1953 | 0.001 (0.001) |
| # ACSW members \times 1954 | 0.002 (0.001) |
| # ACSW members \times 1955 | 0.001 (0.001) |
| # ACSW members \times 1956 | 0.001 (0.001) |
| # ACSW members \times 1957 | 0.000 (0.001) |
| # ACSW members \times 1958 | 0.001 (0.001) |
| English name | -0.045** (0.008) |
| Graduation age | 0.004** (0.001) |
| Female | -0.019 (0.013) |
| Name uniqueness | -0.006 (0.005) |
| HUAC investigation | -0.001 (0.014) |
| Year & Graduation Year FE | ✓ |
| University FE | ✓ |
| Major FE | ✓ |
| Observations | 5555 |
| Adjusted R ² | 0.20 |

Note: This table shows the numeric results of Figure 2, the dynamic DD estimates. FE = Fixed Effects

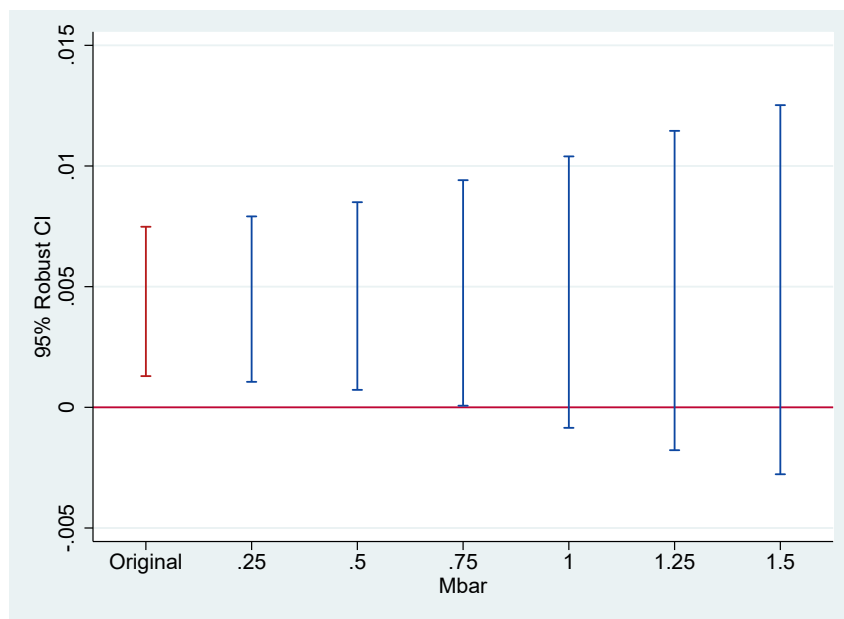
+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Table D.10: Mobilization Effect by Same vs. Different Fields (Full Results)

| | DV = Return to China | | | |
|---|------------------------|------------------------|-----------------------|-----------------------|
| | (1) Narrow field | (2) Narrow field | (3) Broad field | (4) Broad field |
| # ACSW members (same field) \times ACSW active years (1949–1950) | 0.009* (0.004) | | 0.009** (0.003) | |
| # ACSW members (different field) \times ACSW active years (1949–1950) | 0.002 (0.001) | | -0.000 (0.002) | |
| % ACSW members (same field) \times ACSW active years (1949–1950) | | 0.409** (0.134) | | 0.205* (0.099) |
| % ACSW members (different field) \times ACSW active years (1949–1950) | | 0.009 (0.054) | | 0.009 (0.066) |
| English name | -0.045** (0.009) | -0.045** (0.009) | -0.045** (0.009) | -0.045** (0.009) |
| Graduation age | 0.004** (0.001) | 0.004** (0.001) | 0.004** (0.001) | 0.004** (0.001) |
| Female | -0.018 (0.014) | -0.018 (0.014) | -0.018 (0.014) | -0.018 (0.014) |
| Name uniqueness | -0.006 (0.005) | -0.006 (0.005) | -0.006 (0.005) | -0.006 (0.005) |
| HUAC investigation | 0.002 (0.015) | 0.003 (0.015) | 0.001 (0.015) | 0.002 (0.015) |
| Graduation Year FE | ✓ | ✓ | ✓ | ✓ |
| University–Major FE | ✓ | ✓ | ✓ | ✓ |
| Major–Year FE | ✓ | ✓ | ✓ | ✓ |
| Controls | ✓ | ✓ | ✓ | ✓ |
| Observations | 5555 | 5555 | 5555 | 5555 |
| Adjusted R ² | 0.19 | 0.19 | 0.19 | 0.19 |

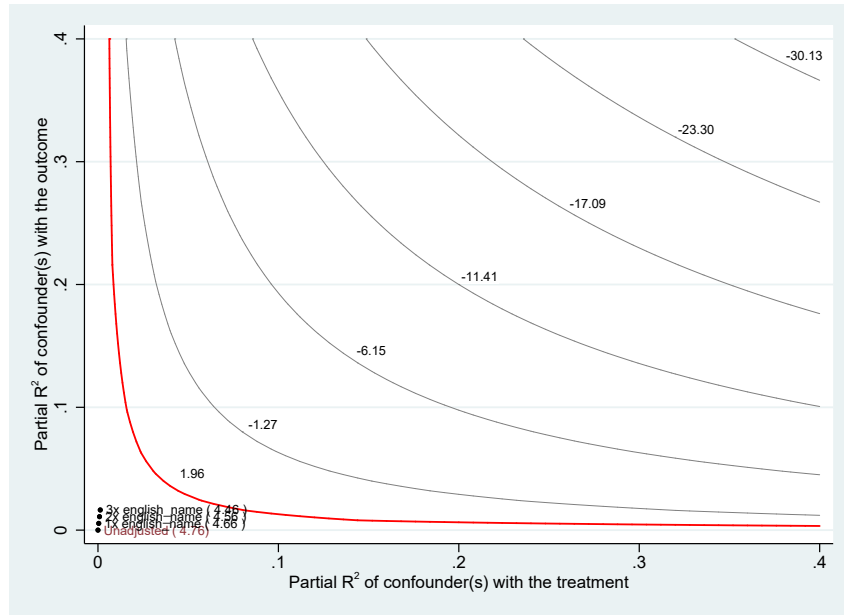
Note: This table shows the full results of Table 3. FE = fixed effects. ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

Figure D.1: Confidence Set Results by Roth et al. (2022)



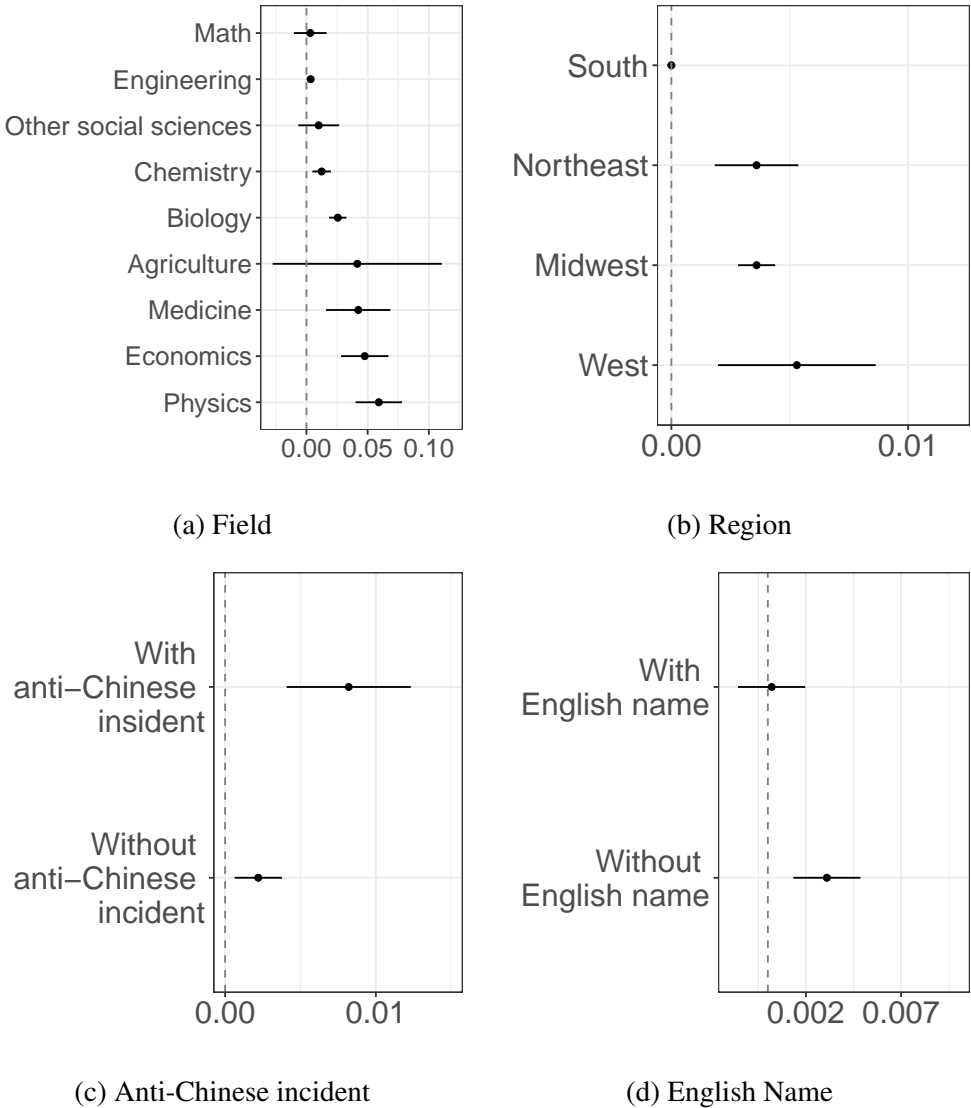
Note: This figure shows the results from Roth et al. (2022). The results indicate that at least when \bar{M} equals to 0.75, our results have sufficient power to reject the null that the average treatment effect is zero (Chiu et al. 2025).

Figure D.2: Sensitivity Contour Plots of the Point Estimate of the Treatment



Note: Sensitivity analysis of the treatment effect of ACSW mobilization on returning to the PRC using the method by Cinelli and Hazlett (2020). We choose whether one uses English name as the benchmark. The results indicate that unobserved confounders are less likely to change the robustness of the results.

Figure D.3: The Heterogeneous Impact of ACSW on Returning to China: DD Estimates



Note: full numeric results are shown at Table [D.11](#), [D.12](#), [D.13](#), and [D.14](#).

Table D.11: The Heterogeneous Impact of ACSW across Majors: DD Estimates (Full Results)

| | DV = Return to China | | | | | | | | |
|--|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|---------------------|----------------------|----------------------|-----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| # ACSW members (same field) \times ACSW active years (1949–1950) | 0.0636*** (0.0223) | 0.0131** (0.0050) | 0.0030* (0.0015) | 0.0303*** (0.0088) | 0.0530*** (0.0130) | 0.0299 (0.0319) | 0.0066 (0.0110) | 0.0180 (0.0158) | 0.0614*** (0.0136) |
| English name | -0.0824** (0.0377) | -0.0411** (0.0158) | -0.0366*** (0.0117) | -0.0511 (0.0620) | -0.2150** (0.0935) | 0.0246 (0.0628) | -0.1115 (0.2272) | -0.0475* (0.0241) | -0.0932** (0.0381) |
| Graduation age | 0.0020 (0.0039) | 0.0037 (0.0031) | 0.0034* (0.0017) | 0.0089 (0.0057) | -0.0120* (0.0062) | 0.0070 (0.0066) | -0.0031 (0.0177) | 0.0005 (0.0018) | 0.0036 (0.0028) |
| Female | -0.1061 (0.0917) | -0.0454** (0.0219) | -0.0372*** (0.0117) | -0.0478 (0.0413) | -0.1397 (0.1792) | -0.1001 (0.0664) | 0.0970 (0.2475) | 0.0326 (0.0261) | 0.0082 (0.0478) |
| Name uniqueness | 0.0079 (0.0157) | 0.0147 (0.0089) | -0.0177* (0.0088) | 0.0071 (0.0251) | -0.0023 (0.0185) | -0.0443 (0.0653) | 0.1334** (0.0617) | 0.0032 (0.0092) | 0.0227 (0.0207) |
| Major | Physics | Chemistry | Engineering | Biology | Medicine | Agriculture | Math | Social sciences | Economics |
| Graduation Year FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| University FE | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Observations | 847 | 1,422 | 1,631 | 735 | 265 | 319 | 278 | 879 | 520 |
| Adjusted R^2 | 0.267 | 0.112 | 0.062 | 0.178 | 0.297 | 0.246 | 0.368 | 0.114 | 0.358 |

Note: This table shows the full results of Figure D.3, panel (a). Standard errors clustered at the university level are reported in parentheses. FE = fixed effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ (two-tailed test).

Table D.12: The Heterogeneous Impact of ACSW across Regions: DD Estimates (Full Results)

| | DV = Return to China | | | |
|---|------------------------|------------------------|------------------------|------------------------|
| | (1) | (2) | (3) | (4) |
| # ACSW members \times ACSW active years (1949–1950) | 0.0053*** (0.0017) | 0.0036*** (0.0004) | 0.0036*** (0.0009) | 0 (.) |
| English name | -0.0676** (0.0254) | -0.0401*** (0.0105) | -0.0367*** (0.0112) | -0.0437*** (0.0116) |
| Graduation age | -0.0065*** (0.0019) | 0.0036** (0.0015) | 0.0040** (0.0017) | 0.0051 (0.0047) |
| Female | -0.0342 (0.0333) | -0.0040 (0.0162) | -0.0292 (0.0189) | -0.0516** (0.0238) |
| Name uniqueness | 0.0067 (0.0108) | -0.0006 (0.0059) | -0.0116 (0.0079) | 0.0039 (0.0144) |
| Year & Graduation Year FE | ✓ | ✓ | ✓ | ✓ |
| University FE | ✓ | ✓ | ✓ | ✓ |
| Major FE | ✓ | ✓ | ✓ | ✓ |
| Observations | 912 | 2,751 | 1,709 | 215 |
| Adjusted R^2 | 0.116 | 0.081 | 0.078 | 0.019 |
| Region | West | Midwest | Northeast | South |

Note: This table shows the full results of Figure D.3, panel (b). Standard errors clustered at the university level are reported in parentheses. FE = fixed effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ (two-tailed test).

Table D.13: The Heterogeneous Impact of ACSW for Localities With or Without anti-Chinese incidents: DD Estimates (Full Results)

| | DV = Return to China | |
|---|------------------------|------------------------|
| | (1) | (2) |
| # ACSW members \times ACSW active years (1949–1950) | 0.0082*** (0.0021) | 0.0022*** (0.0008) |
| English name | -0.0535** (0.0225) | -0.0359*** (0.0056) |
| Graduation age | -0.0064*** (0.0017) | 0.0036*** (0.0010) |
| Female | -0.0144 (0.0457) | -0.0134 (0.0107) |
| Name uniqueness | 0.0056 (0.0099) | -0.0057 (0.0042) |
| Observations | 794 | 4,791 |
| Year & Graduation Year FE | ✓ | ✓ |
| University FE | ✓ | ✓ |
| Major FE | ✓ | ✓ |
| Adjusted R^2 | 0.181 | 0.114 |
| Anti-Chinese incident | Yes | No |

Note: This table shows the full results of Figure D.3, panel (c). Standard errors clustered at the university level are reported in parentheses. FE = fixed effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ (two-tailed test).

Table D.14: The Heterogeneous Impact of ACSW for Graduates With or Without English Names: DD Estimates (Full Results)

| | DV = Return to China | |
|---|----------------------|-----------------------|
| | (1) | (2) |
| # ACSW members \times ACSW active years (1949–1950) | 0.0002 (0.0009) | 0.0031*** (0.0009) |
| Graduation age | 0.0024 (0.0019) | 0.0026* (0.0014) |
| Female | 0.0174 (0.0190) | -0.0264* (0.0153) |
| Name uniqueness | -0.0087* (0.0046) | -0.0060 (0.0050) |
| Year & Graduation Year FE | ✓ | ✓ |
| University FE | ✓ | ✓ |
| Major FE | ✓ | ✓ |
| Observations | 1,406 | 4,174 |
| Adjusted R^2 | 0.109 | 0.121 |
| English name | Yes | No |

Note: This table shows the full results of Figure D.3, panel (d). Standard errors clustered at the university level are reported in parentheses. FE = fixed effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ (two-tailed test).

E Examples of ACSW Activities

Table E.1: Examples of Chinese Scientists' Interactions with ACSW

| Category | # Scientists | Example Quote |
|---|--------------|--|
| Learned about domestic affairs from ACSW bulletin | 46 | Lao Yuanxiu, an ophthalmologist visiting University of Pennsylvania, wrote: <i>"The ACSW told us about domestic situations. I was extremely excited and wanted to return to China."</i> |
| Chatted with ACSW members | 39 | Zhang Xingling (Ph.D., MIT): <i>"I met Li Hengde at the gatherings of ACSW. After the U.S. travel ban was imposed, we met multiple times in New York and Philadelphia, primarily to discuss returning to China ... Through Hou Xianglin's introduction, Zhang met several like-minded peers—Pu Shoushan, Chen Xiu, and Zhang Qin. Sharing the same ideals and aspirations, they often talked from 3 p.m. until dinner, and then continued their conversations at Pu Shoushan's place until two or three in the morning."</i> |
| Learned about CCP policies from ACSW bulletin | 37 | Wang Qidong (Ph.D., University of Iowa) recalled: <i>"From the ACSW, I saw many letters urging Chinese students to return home, telling us that under the leadership of the CCP, the motherland was in great need of talent for her development."</i> |
| Attended ACSW-sponsored social activities | 17 | Liu Jingyi (Ph.D., Illinois State University) wrote: <i>"In these camps, scholars or senior alumni were invited to give talks and lead discussions. This was something we found very engaging. Through these reports and discussions, we not only gained a better understanding of the situation back home and deepened our awareness, but also had the opportunity to exchange ideas and plans regarding our future paths after completing our studies. Many students found these experiences immensely beneficial."</i> |
| ACSW helped find domestic contact | 11 | Liang Zhiquan (Ph.D., Penn State) wrote: <i>"In San Francisco, we reunited with our old classmates Jin Yinchang and Tang Jixue (who were in charge of the ACSW San Francisco branch). They wrote us a letter of introduction to Professor Cao Richang at the University of Hong Kong, in case we needed his assistance."</i> |
| ACSW provided travel accommodation | 8 | Jin Yinchang (Ph.D., UC Berkeley) wrote: <i>"The ACSW provided lodging services in San Francisco, even going so far as to approach the British Consulate there to urge improvements in the handling of transit visas to Hong Kong."</i> |
| ACSW helped with lawsuit against US immigration | 3 | Li Zhengwu (Ph.D., Caltech): <i>Li worked with the ACSW to file a lawsuit against the U.S. Immigration Bureau.</i> |

Note: This table shows the frequencies of different types of interactions with the ACSW as reported in senior scientists' autobiographies and memoirs. Sources: National Museum for Modern Chinese Scientists (<https://www.mmcs.org.cn/kxjfc/kxjfc/index.html>), Wang and Du (2013), and CPPCC (1999)

Figure F.1: Last Schools Attended by Students in China

| Chinese Institutions | Male | Female | Sex Not Indicated | Total |
|------------------------------------|------|--------|-------------------|-------|
| Central University | 578 | 65 | 101 | 744 |
| Tsing Hua University | 885 | 41 | 83 | 1109 |
| National Peking University | 316 | 33 | 82 | 431 |
| Nankai University | 86 | 30 | 19 | 135 |
| Chung Shan University | 163 | 29 | 27 | 219 |
| Northwest University | 26 | 1 | 12 | 39 |
| Chiaotong University | 551 | 12 | 58 | 621 |
| Tungchi University | 23 | 1 | 3 | 27 |
| Chinan University | 39 | 2 | 7 | 48 |
| Wuhan University | 116 | 10 | 19 | 145 |
| Northeast University | 8 | - | - | 8 |
| Chekiang University | 135 | 25 | 18 | 178 |
| Szechuan University | 20 | 5 | 1 | 26 |
| Hunan University | 21 | 2 | 4 | 27 |
| Amoy University | 21 | 3 | 4 | 28 |
| Tunnan University | 19 | 5 | 3 | 27 |
| Kwangsi University | 18 | 6 | 4 | 28 |
| Chungcheng University | 7 | 1 | - | 8 |
| Fuhtan University | 184 | 23 | 58 | 265 |
| Kweichow University | 2 | 1 | 1 | 4 |
| Honan University | 11 | - | 5 | 16 |
| Chungking University | 22 | 2 | 4 | 28 |
| Shansi University | 7 | - | 1 | 8 |
| Yingshih University | 2 | - | - | 2 |
| Tsingtao University | 1 | - | - | 1 |
| Anhui University | 3 | - | 2 | 5 |
| Northwest Medical College | 1 | - | - | 1 |
| Peiyang Engineering College | 80 | 1 | 18 | 99 |
| Northwest Engineering College | 25 | 1 | - | 26 |
| Northwest Agriculture College | 11 | - | 9 | 20 |
| Shanghai College of Commerce | 9 | 1 | - | 10 |
| National Conservatory of Music | 5 | 11 | - | 16 |
| National Academy of Dramatic Arts | 1 | - | - | 1 |
| Political Science University | 101 | 8 | 9 | 118 |
| Normal University | 98 | 18 | 12 | 128 |
| Southeastern Associated University | 179 | 35 | 14 | 228 |

| Chinese Institutions | Male | Female | Sex Not Indicated | Total |
|--------------------------------------|-------|--------|-------------------|-------|
| Taiwan University | 54 | 31 | 5 | 90 |
| Kiangsu Medical College | 2 | 2 | 1 | 5 |
| Fukien Provincial Medical College | 2 | - | - | 2 |
| University of Nanking | 337 | 23 | 56 | 416 |
| Shanghai College | 172 | 100 | 41 | 313 |
| Yenching University | 265 | 197 | 60 | 522 |
| Peiping Catholic (Fu Jen) University | 51 | 54 | 10 | 115 |
| Soochow University | 131 | 44 | 45 | 220 |
| Lingnan University | 334 | 87 | 51 | 472 |
| Cheeloo University | 42 | 20 | 9 | 71 |
| Hua Chung University | 69 | 14 | 7 | 90 |
| Aurora University | 17 | 55 | 1 | 73 |
| West China Union University | 53 | 14 | 3 | 70 |
| Fukien Christian University | 91 | 12 | 11 | 114 |
| Hsiangya Medical College | 23 | 4 | 3 | 30 |
| Shanghai College of Law | 5 | 1 | 1 | 7 |
| Ginsing College for Women | 5 | 186 | 5 | 196 |
| Hanchow Xian College | 63 | 9 | 9 | 81 |
| Minghsien (Oberlin-in-China) College | 2 | - | - | 2 |
| St. John's University | 536 | 187 | 87 | 790 |
| Utopia University | 82 | 18 | 8 | 108 |
| Kwanghua University | 67 | 12 | 12 | 91 |
| Tahua (Great China) University | 30 | 6 | 9 | 45 |
| Wenchang Chunghua University | 4 | 1 | - | 5 |
| Kuomín University of Canton | 2 | - | - | 2 |
| University of Canton | 1 | - | 1 | 2 |
| Shanghai Medical College | 10 | 8 | 3 | 21 |
| Shanghai Women's Medical College | - | 6 | - | 6 |
| Tungteh Medical College | 1 | - | - | 1 |
| Tungshan Medical College | 2 | - | - | 2 |
| Peking Union Medical College | 32 | 24 | 5 | 61 |
| Others | 2882 | 1083 | 107 | 4134 |
| Not indicated | 5073 | 1132 | 1482 | 7687 |
| Total | 14274 | 3982 | 2070 | 20906 |

F Additional Historical Background

The Travel Route

To return to China from the US, students had to board either the *SS President Wilson* or the *SS President Cleveland* in San Francisco. Both ships followed the route from San Francisco to Los Angeles, then to Honolulu, Yokohama, Manila, and finally Hong Kong. The journey lasted three to four weeks. Upon arrival in Hong Kong, the British colonial authorities immediately escorted the students to Shenzhen, Guangdong province, where they were received by the Chinese government.

Newsletter for Chinese Students in America

Figure F.2 shows Vol.3, Issue 8 of the Newsletter for Chinese Students in America. It reports an influential letter written by a scientist Zhu Guangya that calls for students coming back to newly established PRC. Here is the translation of the letter.

Dear Fellow Students,

It is time for us to return to China and contribute to the construction of our homeland. The urgent need for our contributions to the nation's development is clear! The People's Government has repeatedly called for us to come back, and Beijing Radio has also issued a heartfelt appeal for students to return home. The People's Government is warmly welcoming and accommodating returning overseas students. Fellow students,

our countrymen and elders have placed immense hope in us. What are we hesitating for? Why are we lingering here?

Fellow students, we all grew up in China. For over 20 years, we've been educated without planting even a single grain of rice or mining a single piece of coal ourselves. We have been nurtured by the sweat and labor of countless Chinese workers and farmers. Now that they yearn for our return, shouldn't we hasten back to offer our knowledge and skills to the people of our homeland? Yes, we should go back without delay.

You may argue that you haven't learned enough and want to "continue improving" or "continue researching" because "opportunities here are rare." My friends, the pursuit of knowledge is endless. Even if we study for a lifetime, we will never finish learning. If you cling to the research environment here, you might never return. Moreover, after going back, there will be ample opportunities to learn and conduct research—opportunities that align with the practical needs of our country, making them more relevant and meaningful. Staying here to delve into obscure academic niches and learning things irrelevant to China's reality might leave you disconnected when you return home. By then, regret will be too late.

Perhaps you are currently interning in a factory, hoping to gain hands-on experience. But in reality, it's not worth staying longer. American factories are large and highly specialized, with equipment and materials vastly different from what we have at home. Spending a lot of time familiarizing yourself with one department might not be applicable back in China. It's good to gain some insight, but staying too long is unnecessary. Don't forget there are plenty of internship opportunities back home, tailored to China's needs. Isn't that more valuable? China has tasks waiting for us—why stay here working for others?

You might be engaged in scientific, medical, or agricultural research, hoping to promote these fields in China and elevate its academic standards. But researchers should also return as soon as possible. The environment for research is something we need to build ourselves. Should we wait for others to prepare everything for us to enjoy? True research and teaching must also be grounded in practical realities—they cannot be achieved through isolation. Have you noticed how professors at Tsinghua University are tailoring their teaching to fit China's needs? For example, Professor Wang Zunming of Tsinghua uses Chinese iron ore and the specific conditions of the Anshan Steelworks to explain unique issues in China's steel production. These are things you might not learn here.

If your field is in the social sciences—politics, economics, or law—you should return even sooner. It's an undeniable fact that the social environment in the United States is vastly different from that in China. The theories developed in a highly industrialized capitalist society may not be applicable to a society like China's, which has just emerged from semi-colonial and semi-feudal conditions. The path of New Democracy has already clearly outlined the direction for China's social development. Only by aligning with China's realities can we engage in the construction of Chinese society and advance our own social science theories. Friends, think about it: the capitalist theories you're learning here—putting aside the fact that they serve as propaganda

tools for imperialism—how could they possibly align with the needs of China’s New Democratic construction?

China urgently needs social scientists who understand its realities. After returning, there are plenty of opportunities to continue learning. Many returning students voluntarily spend three months at North China University studying before starting work. The sooner you go back, the sooner you can understand China’s political and economic realities, the policies of the People’s Government, and engage in practical work. The earlier you return, the more opportunities you’ll have to serve the people. Right now, every sector in China is in need of talent. We cannot hesitate any longer!

Indeed, our homeland needs talent—talent in every field. The laboring masses of our country have already risen through a great revolution. They have freed themselves from the shackles of feudalism, the exploitation of bureaucratic capital, and the oppression of imperialism. Now, they are standing tall as the masters of China. From this moment on, 450 million farmers, workers, intellectuals, and entrepreneurs will unite under the banner of anti-feudalism, anti-bureaucratic capitalism, and anti-imperialism to build a new, emerging China—a free, democratic China dedicated to the happiness of the people, the workers, and the farmers.

Undoubtedly, this task will be arduous. But we have full confidence that we are advancing on a path filled with light and promise. This responsibility to build a new China is one we must share. Fellow students, our country is calling us! Why are we hesitating? Why are we lingering? We must return immediately.

Listen, fellow students! Our homeland is calling us. Our 450 million compatriots are calling us. Five thousand years of glorious history is calling us. Our People’s Government is calling us! Let’s go back! Let’s return and sow our sweat and blood into the soil of our homeland, nurturing a vibrant bloom. China will rise! Our nation will no longer be humiliated—we are standing tall! Let’s return—let’s return quickly! Our homeland is eagerly waiting for us!

(Signatures of Zhu Guangya and 51 other Chinese students in America omitted; excerpted from Newsletter for Chinese Students in America, Vol. 3, Issue 8, 1950)

Figure F.2: Newsletter for Chinese Students in America, Vol.3, Issue 8, 1950



An Open Letter to All Chinese Students Studying in the United States By Hua Luogeng

Dear Friends,

Without saying farewell to each of you individually, I have returned ahead of you. I have thousands of things to say, but I lack the eloquence to express them all. Still, I can assure you that this letter is filled with heartfelt emotion—every word comes sincerely from within.

To be candid, what I say here is the result of a year-long battle of thought. As for my decision to return to China, some of it comes from solitary reflection, some from conversations and correspondence with friends. If you, too, have felt this kind of frustration, perhaps this letter may help you decide your path. If you have not yet experienced it, I hope you will still read this carefully, for this frustration is not a coincidence—it arises from deep roots.

Let me begin with the larger picture. Today's world is clearly divided into two camps: one is dedicated to the welfare of the masses; the other serves only the interests of a privileged ruling class. The former stands on the side of justice, backed by truth; the latter is riddled with contradictions. One befriends the oppressed nations of the world; the other builds its so-called "civilization" atop the suffering of the unfortunate. As global citizens, we must choose: for the sake of humanity's happiness, we should stand with truth and light—with the side that serves the interests of the majority.

Friends, if you think carefully, you'll recall that we have experienced immigration restrictions and racial discrimination—every one of these placed invisible boundaries around us. Of course, some so-called "exceptional individuals" have managed to break free of these constraints and received special "privileges," perhaps even been "granted" citizenship. But if we search our conscience, can we truly take pride in being singled out while our compatriots continue to suffer humiliation and discrimination? To feel self-satisfied over such "recognition" is truly heartless! And let us be honest—right now, they are seeking to exploit these so-called "talented individuals."

Some may argue, "But their society offers democracy and freedom, which we should admire." To that I say—don't be fooled by words. Indeed, many have long been deceived by such appearances.

Let us examine the reality: the capitalists control all the instruments of power—radio, newspapers, magazines, films. One word from them carries far more weight than anything we say. It's like trying to perform a solo on the guqin in a marketplace full of noisy drums and gongs. While we all technically have "freedom," I dare say, when your hands are worn and your strings are broken, no one will hear the beauty of your melody. In a society of economic inequality, talk of "democracy" is self-deception; talk of "freedom" is self-imposed bondage. True freedom and true democracy are only possible through genuine equality. So-called "freedom" and "democracy" without equality are merely tools of the ruling class.

Now let's analyze how we came to study abroad. One might think it was entirely due to our intelligence and hard work that we passed exams and earned scholarships, that

our achievements and skills earned us a place here. Thus, it's easy to conclude that our current life is due solely to our own merit. But I must say, this is not entirely the case. Why? Who provided us with the special opportunities for education? Who supplied the foreign currency necessary to study abroad? Was it not our fellow countrymen toiling with blistered hands? Was it not our parents, who endured hardship to support us? After being nurtured by the blood and sweat of our compatriots and families, how can we, once grown and educated, refuse to serve them? How is that fair or reasonable?

Friends, we must not “burn the bridge after crossing the river.” We must recognize: having enjoyed such rare privileges, we bear a responsibility to repay them. Especially those among us who are bright and capable—we must shoulder the immense tasks that the People's Republic of China now faces!

Let us turn to our newborn motherland, and see how she continues to stride forward from her great victories! The New Year's Message published by Xinhua on January 1st tells us: 1949 was the year of great victory in the Chinese people's liberation war and the year the People's Republic of China was born. This year, we broke through the peace offensives of domestic and foreign reactionaries, cleared out the Kuomintang bandits from over 90% of the population's territory, and won decisive victories. We convened the Chinese People's Political Consultative Conference, passed the Common Program as the provisional constitution, and established a Central People's Government. This government is not only supported by the entire nation, but also welcomed by the anti-imperialist camp worldwide. The Soviet Union and other people's democracies swiftly established equal and friendly diplomatic relations with us.

In one year, we liberated and governed vast cities and rural areas, quickly established revolutionary order, suppressed counterrevolutionary activities, and mobilized the working masses. In many cities, people's representative assemblies have been convened; in many rural areas, banditry has been eradicated, fair taxation introduced, and campaigns launched against exploiters and landlords. We overcame enemy sabotage, blockades, droughts, and floods. Despite unbalanced finances, we restored production and transportation, and achieved notable progress. . .

China is advancing rapidly. The victories of 1949 far exceeded expectations. In 1950, with much better conditions, we can expect even greater achievements. Once armed enemies are wiped out across the country, and as the people's awareness and organization grow, we will gradually overcome the burdens of prolonged war and move toward a better life.

Friends! “Though Liangyuan is beautiful, it is not a place to dwell forever.” Let us return home!

Some might say, “But I am still young—what harm in waiting a little longer?” I say, there's no need. We are all in the prime of our lives. If we are to return eventually, why not go now, while our energy can be put to its fullest use?

In short: for the sake of truth—we should return; For the sake of our nation—we should return; For the sake of serving the people—we should return; Even for the sake

of our own futures—we should return now, to lay the foundations for our work and to fight for the construction and development of our great motherland!

Friends! With heartfelt sincerity, let us meet this year in our capital, Beijing!